



UMKHANYAKUDE DISTRICT MUNICIPALITY

BID No SCMU 001/2026/2027

CIDB GRADING 8CE

BID DESCRIPTION COMPLETION OF NONDABUYA WATER SUPPLY SCHEME –
WARDS 6, 8, 9, 14 & 19

TOTAL BID AMOUNT _____

AMOUNT IN WORDS _____

CLOSING DATE 12h00, 31 AUGUST 2026

NAME OF THE BIDDER _____

CONTACT PERSON _____

STREET ADDRESS _____

TELL: _____ **CELL:** _____

JULY 2026

Issued By:



UMKHANYAKUDE DISTRICT MUNICIPALITY

Harlingen No. 13433, Kingfisher Road
P.O Box 449,
Mkuze, KZN,
3965
Telephone N°: (035) 573 8600

Prepared By:



SDM Consulting Engineers & Project Managers

Strathmore Park
305 Musgrave Road
Essenvue Building
Suite 207A ,2nd Floor

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T1: TENDERING PROCEDURE

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

Tender Number: SCMU 001/2026/2027

TENDER TITLE: COMPLETION OF NONDABUYA WATER SUPPLY SCHEME – WARDS 6, 8, 9, 14 & 19

Tenders are hereby invited from experienced and suitably qualified contractors for the Completion of the Nondabuya Water Supply Scheme – Wards 6, 8, 9, 14 & 19.

It is estimated that tenderers should have a CIDB contractor grading of 8CE or higher. Only tenderers who are registered with the CIDB, or are capable of being registered prior to the closing date of the tender, in a contractor grading of 8CE, will be eligible to tender. Joint ventures or potentially emerging enterprises that satisfy the criteria stated in the tender data are eligible to tender

To be eligible for evaluation, tenderers must achieve a minimum Quality Score of 65%, assessed in terms of objective criteria for experience, financial resources, key personnel, quality assurance and previous performance.

A Compulsory Briefing Meeting and Site Visit will be held at **10h00am on 06 August 2026**. Prospective tenderers shall meet at the **Nondabuya Community Hall** (27° 20' 47.74"S; 32° 09' 20.07"E) in Ward 19, Jozini and the briefing will be followed by a site visit. The Engineer will not be available for inspection purposes on any other occasion. Prospective Contractors are required to bring their copies of the tender documents to the compulsory briefing and site visit for signing by the Engineer. No documents will be distributed at the tender briefing meeting. Failure to obtain a Tender Specification Document or non attendance of the compulsory briefing and site visit will result in the disqualification of your tender.

Queries relating to the technical issues of these documents may be addressed to **Mr. Zama Thethwayo**. Telephone:- 035 573 8600; Email: zamathet@gmail.com. For administrative queries, contact Supply Chain Management Manager, **Mr S.B. Buthelezi** Telephone:- 035 573 8600; Email: scm@ukdm.gov.za.

The closing time for receipt of tenders is at 12h00 on 31 August 2026. Only tenders deposited into the official tender box by the closing time and date will be accepted. Tenders **together with USB** (with the scanned completed tender document), completed as prescribed, shall be sealed in an envelope marked "Tender No. SCMU 001/2026/2027" and deposited in the official tender box in the foyer of Harlinger No.13433, Kingfisher Road, Mkuze, KwaZulu Natal. The Municipality will not be held responsible for any tenders delivered by courier services.

Tenders will be evaluated and adjudicated in terms of the uMkhanyakude District Municipality's Supply Chain Management Policy and the 90/10 preference point scoring system, with 90 points for price and 10 points for Specific Goals for tenders of value above R50 million. uMkhanyakude District Municipality subscribes to the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) and its regulations, 2022.

EVALUATION CRITERIA

To be eligible for evaluation, tenderers must achieve a minimum Quality Score of 65% on the following:

CRITERIA	Weight %
Company Experience	15%
Bank Rating	16%
Experience of Key Personnel	17%
Quality Assurance	10%
Performance on Previous Contracts	42%
TOTAL	100%

PREFERENCE POINT SYSTEM		
Price	90	Requirements to claim points
Specific Goals	10	
Enterprise owned by Black People ≥ 51%	2	Certified ID Copies / CSD Full Report / Shareholder certificate
Enterprise owned by Women ≥ 51%	2	Certified ID Copies / CSD Full Report / Shareholder certificate
Enterprise owned by Youth	2	Certified ID Copies / CSD Full Report / Shareholder certificate
Enterprise owned by Disabled Person	2	Medical Certificate
Enterprise owned by SMMEs – QSE and EME	2	CSD Full report / Proof of municipal accounts / affidavit / proof of residence signed by ward councilor (for those residing in rural areas) / lease agreement

The successful Tenderer will be required to provide security in the form of either Retention of 10% of the value of works or a Performance Guarantee of 10% of the Contract Sum.

uMkhanyakude District Municipality does not bind itself to accept the lowest or any of the tenders and reserves the right to accept the whole or any part of the tender.

DR. NJ SIBEKO
MUNICIPAL MANAGER
UMKHANYAKUDE DISTRICT MUNICIPALITY

MBD 1

INVITATION TO BID PART A

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF MUNICIPALITY/ MUNICIPAL ENTITY)					
BID NUMBER:	SCMU 001/2026/2027	CLOSING DATE:	31 AUGUST 2026	CLOSING TIME:	12H00
DESCRIPTION	COMPLETION OF NONDABUYA WATER SUPPLY SCHEME – WARDS 6, 8, 9, 14 & 19				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS					
UMKHANYAKUDE DISTRICT MUNICIPALITY Harlingen No. 13433, Kingfisher Road					
P.O Box 449,					
Mkuze, KZN,					
3965					
Telephone N°: (035) 573 8600					
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:	
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]		ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES OFFERED? ☐ Yes ☐ No [IF YES, ANSWER PART B:3]		
TOTAL NUMBER OF ITEMS OFFERED			TOTAL BID PRICE		R
SIGNATURE OF BIDDER			DATE		
CAPACITY UNDER WHICH THIS BID IS SIGNED					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:		
DEPARTMENT	Finance		CONTACT PERSON	Mr Zama Thethwayo	
CONTACT PERSON	Mr S.B. Buthelezi		TELEPHONE NUMBER	(035) 573 8600	
TELEPHONE NUMBER	(035) 573 8600		FACSIMILE NUMBER	(035)55731094	
FACSIMILE NUMBER	(035)55731094		E-MAIL ADDRESS	zamathet@gmail.com .	
E-MAIL ADDRESS	siya@ukdm.gov.za				

MBD 1

PART B

TERMS AND CONDITIONS FOR BIDDING**1. BID SUBMISSION:**

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

2. TAX COMPLIANCE REQUIREMENTS

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

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

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

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

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

SIGNATURE OF BIDDER:

.....

CAPACITY UNDER WHICH THIS BID IS SIGNED:

.....

DATE:

.....

T1.2 TENDER DATA (INCLUDING SPECIAL CONDITIONS OF TENDER)

The Conditions of Tender applicable to this contract are the Standard Conditions of Tender as contained in Annexure F of the CIDB Standard for Uniformity in Construction Procurement, and as Annex F of the CIDB Standardized Construction Procurement Documents for Engineering and Construction Works (28 May 2010). This document is obtainable separately.

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

Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

Clause number	Tender Data
	F.1.1 Actions
F.1.1	The Employer is Umkhanyakude District Municipality
	F.1.2 Tender Documents
F.1.2	The Tender Documents issued by the Employer comprise the following documents: VOLUME 1 – Tendering Procedures and Returnable Documents Part T1: Tendering procedures Part T2: Returnable documents Part C1: Agreements and Contract data Part C2: Pricing data Part C3: Scope of work Part C4: Site information VOLUME 2 – Book of Drawings
	F.1.4 Communication and Employer's agent
F.1.4	The Employer's agent is : SDM Consulting Engineers & Project Managers Strathmore Park 305 Musgrave Road Essenview Building Suite 207A ,2nd Floor Contact Person: Mr. Noel Nyawade Cell: +27 79 495 9986 Email: nnyawade@sdmconsulting.co.za
	F.1.5 The Employer's right to accept or reject any tender offer
F.1.5.2	The minimum period will be 3 months
	F.2.1 Eligibility

F.2.1	Umkhanyakude District Municipality will only consider submissions from tenderers who satisfy the following criteria: a) Only those Tenderers who are registered with the CIDB in a contractor grading designation equal to or higher than 8CE determined in accordance with Regulations 25 (1B) or 25 (7A) of the Construction Industry Development Regulations, for a CE class of construction work, are eligible to have their tenders evaluated b) Joint ventures are eligible to submit tenders provided that: i) every member of the joint venture is registered with the CIDB ii) the lead partner has a contractor grading designation in the CE class of construction work. iii) the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than the contractor grading designation required iv) a valid Joint Venture Agreement is included with the tender, which shall be based on the CIDB Sample JV Agreement and shall include a clause to the effect that when the JV is dissolved the Lead Partner will remain liable in terms of the Contract including responsibility for latent defects and that this liability will continue for 10 years after completion of the Contract v) the Lead Partner shall be nominated in the returnable documents and accepts all liability in terms of the Contract c) Only those tenderers who demonstrate by providing evidence that they have in their employ management and supervisory staff satisfying the requirements of the scope of work for supervisory and management staff are eligible to submit tenders. d) the Tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; e) the Tenderer has not: i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; f) the Tenderer has completed and signed the Declaration of Interest and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract; g) the Tenderer has completed and signed the Declaration of Independent Tender Determination and has arrived at the accompanying tender independently from, and without consultation, communication, agreement or arrangement with any competitor.
	F.2.7 Clarification meeting
F .2.7	There shall be a compulsory clarification briefing. The details for which are stated in the Tender Notice and Invitation to Tender.
	F.2.11 Alterations to Documents
F .2.11	A Tender offer shall not be considered if the document has been taken apart from the original binding. A Tender offer shall not be considered if alterations have been made to the offer or contract data (unless such alterations have been duly authenticated by the Tenderer) or if any particulars required therein have not been completed in all respects. The tender shall be completed in full in black ink.

	Use of correction fluid is not permitted, and the presence of correction fluid in the tender shall render the tender invalid.
	F.2.12 Alternative tender offers
F .2.12	No alternative tender offers shall be considered.
	F.2.13 Submitting a tender offer
F.2.13.3	Parts of each tender offer communicated on paper shall be submitted as an original
F.2.13.5 and F.2.13.7	The Employer's details and address for delivery of tender offers are stated in T1.1 Tender Notice and Invitation to Tender. Identification details The identification details which must be stated in the tender offer outer package are: Tender Number Title of Tender Closing Date Closing Time Tenderer's Name Tenderer's Address Tenders issued in more than one volume shall be returned in the same manner and bound separately as per the tender volumes issued. The tender box is available to the public from Monday between 07h30 to 16h00. It is the Tenderers sole responsibility to ensure that tenders are placed in the tender box and only Tenders that have been placed in the tender box before the stipulated closing date and time shall be considered.
F .2.13.6	A two-envelope system is not applicable
	F.2.15 Closing time
F.2.15.1	The closing time for submission of tender offers is as stated in T.1.1 Tender Notice and Invitation to Tender .
	F.2.16 Tender offer validity
F.2.16.1	The tender offer validity period is one hundred and twenty (120) days from the closing date .
	F.2.17 Clarification of Tender Offer after Submission
F.2.17	Clarification of a Tender Offer in response to a request to do so from the Employer during the evaluation of Tender Offers must be provided within two working days of the Employer's request, failing which the Employer may regard the Tender Offer as being non-responsive. Arithmetical errors, omissions, discrepancies and imbalanced unit rates Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount appearing in the summary to the Pricing Schedule shall govern. Check responsive tender offers for: - the gross misplacement of the decimal point in any unit rate; - omissions made in completing the pricing schedule or bills of quantities; or - arithmetic errors in:

	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. d) imbalanced unit rates. Notify shortlisted tenderers of all errors, omissions or imbalanced rates that are identified in their tender offers. Where the tenderer elects to confirm the errors, omissions or re-balancing of imbalanced rates the tender offer shall be corrected 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 unit rate shall govern and the line item total shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted and the unit rate shall be corrected. b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall be corrected. c) Where the unit rates are imbalanced adjust such rates by increasing or decreasing them and selected others while retaining the total of the prices derived after any other corrections made under (a) and (b) above. Where there is an omission of a line item, no correction is possible and the offer may be declared non-responsive. Declare as non-responsive and reject any offer from a tenderer who elects not to accept the corrections proposed and subject the tenderer to the sanction under 4.16.2 of SANS 10845-3 The tenderer is required to submit balanced unit rates for rate only items in the pricing schedule. The rates submitted for these items will be taken into account in the evaluation of tenders
	F.2.18
F.2.18	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.2.19 Inspections, tests and analysis
F.2.19	Access shall be provided for inspections and testing by personnel acting on behalf of the Employer on request.
	F.2.20 Submit securities, bonds, policies, etc.
F.2.20	The Employer shall not award a contract to any tenderer that does not hold a valid liability insurance providing cover in an amount of not lower than a minimum of R 10 million in respect of each and every claim during the period of insurance. Proof of insurance must be submitted with the tender and appended to Returnable Schedules. The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part T2.2 of this procurement document.

	F.2.23 Certificates														
F.2.23	The Tenderer is required to submit with his tender: 1) A Tax Compliance Status letter (with pin) issued by the South African Revenue Services. 2) Central Supplier Database (CSD) Report 3) Proof of good standing in terms of the COID Act 4) Certificate of Independent Bid Determination 5) Valid construction sector BBBEE certificate 6) Company Registration Certificate														
	F.3.4 Opening of tender submissions														
F.3.4	Tenders shall be opened immediately after the closing time for tenders as stipulated in T1.1 Tender Notice and Invitation to Tender .														
	F3.8 Test for responsiveness														
F.3.8	The minimum qualifying Functionality Evaluation Score shall be Sixty Five (65) points														
	F.3.11 Evaluation of tender offers														
F.3.11.3 F.3.11.7 F.3.11.8	The procedure for the evaluation of responsive tenders is Method 2 (Financial Offer and Preference).														
F.3.11.9	The table below lists the returnable schedules that set out the scoring criteria and sub-criteria, and the percentage weighting for the score achieved against the relevant schedule: <table border="1"> <thead> <tr> <th>Criteria</th><th>Weight %</th></tr> </thead> <tbody> <tr> <td>Company Experience</td><td>15%</td></tr> <tr> <td>Bank Rating</td><td>16%</td></tr> <tr> <td>Experience of Key Personnel</td><td>17%</td></tr> <tr> <td>Quality Assurance</td><td>10%</td></tr> <tr> <td>Performance on Previous Similar Contracts</td><td>42%</td></tr> <tr> <td>TOTAL</td><td>100%</td></tr> </tbody> </table> <u>Failure to score a single point in any of the criteria listed above will deem the bid to be non-responsive and the bidder will be disqualified.</u> The score allocated by each Bid Evaluation Committee member for a tender shall be the sum of the scores relevant to each of the above listed returnable schedules multiplied by the percentage weighting for each as shown above.	Criteria	Weight %	Company Experience	15%	Bank Rating	16%	Experience of Key Personnel	17%	Quality Assurance	10%	Performance on Previous Similar Contracts	42%	TOTAL	100%
Criteria	Weight %														
Company Experience	15%														
Bank Rating	16%														
Experience of Key Personnel	17%														
Quality Assurance	10%														
Performance on Previous Similar Contracts	42%														
TOTAL	100%														
	F.3.17 Provide copies of the contracts														
F.3.17	The number of paper copies of the signed contract to be provided by the Employer is one(1).														

SECTION B**STANDARD CONDITIONS OF TENDER****1. DOCUMENTS**

This document comprises of the Standard Conditions of Tender, Standard Conditions of Contract, Special Conditions of Contract (if any), Legislation, Definitions, Specifications, Pricing Schedule, Tender Form, Drawings (if any), Data Sheets and Annexures thereto.

2. COMPULSORY SITE INSPECTION/TENDER BRIEFING MEETING

Will be held on the **06th of August 2026, Thursday at 10h00am**. Prospective tenderers shall meet at the Nondabuya Community Hall (27° 20' 47.74"S; 32° 09' 20.07"E) in Ward 19, Jozini and the briefing will be followed by a site visit.

3. SUBMISSION OF TENDERS

Tenders must be made out on the Tender Form annexed hereto. Tenderers are advised that this document must be completed in ink and submitted in its entirety. Failure to comply with this condition shall result in the tender being disqualified.

Only original hand written priced tender documents will be considered. Tenders submitted by electronic mail, telex or facsimile shall not be considered. ***The use of correction fluid is strictly prohibited.*** All corrections are to be countersigned.

Tenderers using Courier Companies or any other mode of transport to deliver their tender documents must ensure that the tender documents are delivered to the District Municipal Offices by the -close of tenders. The Council shall not be held liable for any tender document which is not timeously delivered, mislaid or incorrectly delivered due to the negligence of the Courier Company or any other party involved in the delivery of the tender documents, including any employee of the Council.

Sealed tenders endorsed with the appropriate contract number, must reach the District Municipal Offices, no later than the closing date and time stated in the public advertisement inviting tenders, when they will be opened in public. Under no circumstances will any extension of time be allowed for the submission of tenders. Tenders shall remain valid for four (4) calendar months from the date of opening, except for the initial five (5) working days grace period after the close of tenders within which period a tenderer may be permitted to withdraw its tender subject to an application with good and sufficient reasons being submitted in writing to obtain approval of such withdrawal, at the sole discretion of the Head: Supply Chain Management.

All literature submitted must be securely attached to the tender. The Council shall not be held liable for any loss or damages sustained due to the Tenderer's failure to comply with this condition.

In the case of a Tenderer withdrawing its tender after the expiry of the grace period, the Council may refuse to receive or consider, for such period as it may think fit, any further tenders from that Tenderer.

4. COMMUNICATION WITH MEMBERS OF THE COUNCIL OR COUNCIL EMPLOYEES

Without detracting from any prevailing law, no Tenderer shall offer, promise or give any person or persons connected with the adjudication, or awarding of the tender, any gratuity, bonus, discount or consideration of any kind in connection with the obtaining of a contract. Nor shall any Tenderer communicate with any member of the Council or a Council employee on a question affecting the awarding of a contract which is the subject of a tender, during the period between the closing date of tenders and the date of notification of the successful Tenderer; provided always that the Head: Supply Chain Management may, in exceptional circumstances, obtain additional information from a Tenderer to enable her to formulate her recommendation to Council.

Any attempt to contravene this condition which is brought to the notice of the Head: Supply Chain Management shall result in the disqualification of the Tenderer.

Prospective Tenderers are further advised that s118 of the Municipal Finance Management Act prohibits the interference, by any person, with the supply chain management system of the Municipality and the amendment of or tampering with any tender, quotation, contract or bid after its submission.

5. **IMPORT PERMITS**

The Council will not undertake to secure any import permits or currency for the import of any goods or materials required for the execution of this contract. The Tenderer must apply directly for any import permits or currency needed. However, the Council will furnish the successful Tenderer with a supporting statement, if required.

6. **REGISTRATION WITH THE CENTRAL SUPPLIER DATABASE (CSD)**

The National Treasury's Central Supplier Database (CSD) has been open for registration from 01 September 2015. The CSD serves as one single source of supplier information to all spheres of government.

Within this system, suppliers are required to register once when they do business with the state. This will significantly reduce the administrative burden for businesses, especially small and medium sized enterprises. The database interfaces with the South African Revenue Service (SARS), the Companies and Intellectual Property Commission (CIPC) and the payroll system. It will electronically verify a supplier's tax status and enable public sector officials doing business with the state to be identified.

All prospective suppliers can register any time on the CSD website www.csd.gov.za

uMkhanyakude District Municipality will not award any tender to a supplier not registered as a prospective supplier on the CSD. Accordingly, negotiations for the tender award will only be concluded with the qualify tenderer(s) who is/are registered on the CSD.

In order for Council to verify your Company's registration with CSD, please provide the following information for verification purposes:

CSD Supplier Number	
Unique Registration Reference Number	

Failure to provide the above information shall render the tender to be disqualified.

7. **TAX CLEARANCE CERTIFICATE REQUIREMENTS**

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

Tenderers shall be required to submit, together with the tender document, a valid Tax Clearance Certificate and a Tax Compliance Status Verification Pin issued by SARS. Failure to submit a valid Tax Clearance Certificate and a Tax Compliance Status Verification Pin will result in the invalidation and disqualification of the tender.

Further to the above, Tenderers are to note that the Tax Clearance Certificate must be valid for the full duration of the tender validity period i.e., three (3) months commencing from the closing date of the tender.

Should the validity of the Tax Clearance Certificate expire prior to the final award of the contract being made, the Council reserves the right to request the Tenderer to submit a further valid Tax Clearance Certificate. In this instance, the Tenderer shall be given seven (7) working days' written notice in which to comply. Should the Tenderer fail to comply with this request, the Council further reserves the right to make no award to the Tenderer and the Council shall not be held liable for any loss or damages sustained by the Tenderer.

If a tenderer has already submitted a Tax Clearance Certificate when registering on the Central Supplier Database (CSD), then there is no need to submit a hardcopy of another Tax Clearance Certificate provided that the Tax Clearance Certificate is still valid for the full duration of the validity period for this tender. In this instance, the Tenderer will be required to indicate below the CSD Supplier Number and Unique Registration Reference Number for verification purposes:

CSD Supplier Number	
Unique Registration Reference Number	

8. **RATES**

The prices, rates or percentages quoted in the proposal shall be deemed to include all costs, including but not limited to materials, plant, labour, patent rights and royalties, freight, insurance, customs, railage, delivery, etc, unless the Service Provider states otherwise in the proposal.

9. **INCOMPLETE TENDERING**

Tenders may be rejected if they show any additional, conditional or incomplete offers or irregularities of any kind in either the Tender Form or the Pricing Schedule, or if the prices tendered in the Schedule are not market related i.e., the tendered rates do not conform to current day prices.

Partial awards **may** be made where this is perceived by the Accounting Officer to be in the best interests of the Council. Council reserves the right to take into account the principle of the distribution of works in order to empower SMME's and BEE's.

Should there be any difference or discrepancy between the prices and particulars contained in the Tender Form and those contained in any covering letter submitted by the Tenderer, the prices and particulars contained in the Tender Form shall prevail.

10. **ACCEPTANCE OF ANY TENDER**

The Council does not bind itself to accept the lowest or any tender and reserves the right to accept the whole or any part of a tender.

Where less than three (3) tenders are received, the Head: Supply Chain Management reserves the right to purchase such items on the open market notwithstanding the acceptance of an offer.

The procedure which will be followed with the acceptance of a tender is as follows:

Formal agreement will be signed.

A Service Level Agreement will be entered into with the successful Service Provider. A letter of acceptance stipulating which rate/s has been accepted will be sent by the Head: Supply Chain Management to the Tenderer. The tender documents, together with the

letter of acceptance, shall constitute a binding agreement between the Tenderer and the Council.

Unless otherwise stipulated in the covering letter submitted with the tender, the Tenderer shall have waived, renounced and abandoned any conditions printed or written upon any stationery used for the purpose of, or in connection with, the submission of the tender which are in conflict with the Council's Conditions of Tender and the Standard Conditions of Contract. The Tenderer is warned that any material divergence from the official conditions or specification may render the tender liable to disqualification.

11. DOMICILIUM CITANDI ET EXECUTANDI

For the purpose of the service of all documents and the giving of notice as may be required in terms of this contract, or as a result of any action arising in conjunction with it, the Council chooses Stand 13433 King Fisher Road, Remainder of Harlingen Farm Mkuze 3965 as its *domicilium citandi et executandi*.

The Tenderer's *domicilium citandi et executandi* shall be whatever street address is given in the Tender Form attached hereto.

Either party may, at any time, give one (1) month notice, in writing, of a change of its *domicilium citandi et executandi* provided that such address shall be within the Republic of South Africa.

12. DATA SHEETS

Tenderers shall be required to complete all Data Sheets and the Tender Form attached hereto in their entirety for adjudication purposes. Where Data Sheets and/or any other documentation as contained herein are required to be commissioned, such Data Sheets and/or documentation must be stamped and signed by a Commissioner of Oaths (where applicable). ***Failure to comply with these provisions will render the offer unresponsive (invalid).***

13. PROHIBITION ON AWARDS TO PERSONS IN THE SERVICE OF THE STATE

The Supply Chain Management Regulations states that the Council may not make any award to a person:

- (a) Who is in the service of the state;
- (b) If that person is not a natural person, of which and director, manager, principal shareholder or stakeholder is a person in the service of the state; or
- (c) Who is an advisor or consultant contracted with the municipality or municipal entity.

14. MUNICIPAL FEES

All Tenderers are to sign the Declaration herein declaring that their Municipal Fees are in order, or that proper arrangements have been made with the Council. Tenderers must include the relevant account numbers in the declaration.

15. APPEALS AND/OR OBJECTIONS

Any Tenderer aggrieved by decisions or actions taken by the Municipality may lodge within fourteen (14) calendar days of the date of the decision or action, a written objection or complaint to the Municipal Manager Tribunal. In the event that an appeal and/or objection is lodged, the above procedure shall apply.

16. JOINT VENTURE AGREEMENTS AND CONSORTIUMS

Tenderers intending to tender in the form of Joint Ventures/Consortiums **must submit** the following documentation together with the tender:

- 1) Original valid Tax Clearance Certificates or a Tax Compliance Status Verification Pins issued by SARS of all parties of the Joint Venture/Consortium;
- 2) All parties of the Joint Venture/Consortium must submit signed copies of:
 - a) The Declaration of Interest Form;
 - b) The Declaration of Bidder's Past Supply Chain Management Practices Form, and
 - c) The Certificate of Independent Bid Determination Form.
- 3) An undertaking duly signed by all parties of the Joint Venture/Consortium indicating their intention to enter into an agreement for the purposes of this contract, and,

Further to the above, the name of the Joint Venture/Consortium must appear on the relevant pages of the document. Failure to comply with these requirements shall lead to disqualification.

17. COMBATIVE TENDERING

The Supply Chain Management Regulations states that Combative tendering practices are unethical and illegal. These include but are not limited to:

- (i) Suggestions to fictitious lower quotations;
- (ii) Reference to non-existent competition;
- (iii) Exploiting errors in tenders;
- (iv) Soliciting tenders from Tenderers whose names appear on the list of restricted tenderers/suppliers/persons, and,
- (v) Submission of two tenders by a Tenderer.

Any attempt by a Tenderer to contravene this condition which is brought to the notice of the Municipal Manager or the Head: Supply Chain Management shall result in the disqualification of the tender. The Council further reserves the right to take any other action as it may deem necessary.

18. ADJUDICATION CRITERIA

The tender shall be evaluated on a Three Stage Evaluation System – Stage One: Compulsory Returnable Documents; Stage Two: Functionality and Stage Three: 90/10 Special Goals Point System in accordance with the UKDM SCM Policy.

UMKHANYAKUDE DISTRICT MUNICIPALITY**DEFINITIONS**

- 1) The following definitions apply: -
- 2) **"Council"** means Umkhanyakude District Municipality (UKDM).
- 3) **"Head: Supply Chain Management"** means the Head: Supply Chain Management of the day of the Umkhanyakude District Municipality or the Manager's duly appointed Representative.
- 4) **"Accounting Officer"** means the: Office of the Municipal Manager of uMkhanyakude District Municipality or the said Manager's duly appointed Representative.
- 5) **"Service Provider/Contractor"** means the person, firm, Service Provider or company whose tender has been accepted by the District Municipality and includes the Service Provider's heirs, executors, administrators, trustees, judicial managers or liquidators, as the case may be, but not, except with the written consent of the Council, any assignee of the Service Provider.
- 6) **"Special Conditions"** means any addition to or departure from or amendment of these Standard Conditions as set out in Annexure "A" hereof.
- 7) **"Drawings"** means the drawings referred to in the Specification and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer.
- 8) **"Contract Document"** means the Conditions of Tender, Scope of Contract, Terms of Reference, these Definitions, Special Conditions (if any), Equipment Specifications, Rates, Percentages and Prices, Tender Form and Annexures thereto. Any amendments to the contract document agreed to by the Council and the Service Provider, Provisional Letter of Acceptance and the final Letter of Final Acceptance.
- 9) **"Goods"** means the equipment, plant, vehicles, service or materials to be supplied in accordance with the Contract.
- 10) **"The Tender"** means the written offer made by the Service Provider to the Council.
- 11) **"Preferential Procurement Policy"** means the Preferential Procurement Policy Framework Act, 2000 (Act No 5 of 2000).
- 12) **"SARS"** means the South African Revenue Services.

T2 RETURNABLE DOCUMENTS

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T2.1: List of Returnable Documents	T2.18
T2.2: Returnable Schedules and Documents	T2.20

T2.1 LIST OF ALL COMPULSORY RETURNABLE DOCUMENTS AND SCHEDULES

The Tenderer shall complete and submit the following returnable schedules and documents:

	Tenderer's Check List	Page No.
COMPULSORY RETURNABLE SCHEDULES AND OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES		
T2.2.1 Authority for Signatory		T2.21
T2.2.2 Registration Certificate / Agreement / ID Document		T2.28
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T2.2.19 Contract Participation Goals		T2.63
T2.2.20 Tenderer's Experience		T2.67
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RETURNABLE SCHEDULES AND OTHER DOCUMENTS THAT WILL BE INCORPORATED INTO THE CONTRACT		
T2.2.22 Key Personnel & Experience of Key Personnel		T2.70
T2.2.23 ISO 9001 Certificate / Own Internal QA Plan		T2.73
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T2.2.25	Amendments, Qualifications and Alternatives		T2.84
T2.2.26	Record of Addenda to Tender Documents		T2.86
T2.2.27	Schedule of Plant & Equipment		T2.87
T2.2.28	Proposed Sub Contractors		T2.88
T2.2.29	Preliminary Program		T2.89
T2.2.30	Preliminary Cash Flow		T2.90

T2.2 RETURNABLE SCHEDULES & DOCUMENTS

T2.2.1: Returnable Schedules and Documents required for Tender Evaluation Purposes..... T2.21

T2.2.2: Returnable Schedules and other Documents that will be incorporated into the Contract ..T2.70

T2.2.1 AUTHORITY FOR SIGNATORY

Fill in the relevant portion applicable to the type of organization

A. COMPANIES

If a Tenderer is a company, a certified copy of the resolution by the board of directors, personally signed by the chairperson of the board, authorizing the person who signs this Tender to do so, as well as to sign any contract resulting from this Tender and any other documents and correspondence in connection with this Tender and/or contract on behalf of the company must be submitted with this Tender, that is before the closing time and date of the Tender

AUTHORITY BY BOARD OF DIRECTORS

By resolution passed by the Board of Directors on 20.....

Mr/Mrs (whose signature appears below) has been duly authorized to sign all documents in connection with this Tender on behalf of

(Name of Company)

IN HIS/HER CAPACITY AS:

SIGNED ON BEHALF OF COMPANY:
(PRINT NAME)

SIGNATURE OF SIGNATORY: **DATE:**

WITNESSES:

B. SOLE PROPRIETOR (ONE - PERSON BUSINESS)

I, the undersigned

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

.....

.....
SIGNATURE

.....
DATE

C. PARTNERSHIP

The following particulars in respect of every partner must be furnished and signed by every partner:

Full name of Partner	Residential Address	Signature
.....		
.....		
.....		
.....		

We, the partners in the business trading as

hereby authorize
to sign this Tender as well as any contract resulting from the Tender and any other documents and
correspondence in connection with this Tender and /or contract on behalf of

.....		
Signature	Signature	Signature

.....		
Date	Date	Date

D. CLOSE CORPORATION

In the case of a close corporation submitting a Tender, a certified copy of the Founding Statement of such corporation shall be included with the Tender, together with the resolution by its members authorizing a member or other official of the corporation to sign the documents on their behalf.

By resolution of members at a meeting on 20.....

at

Mr/Ms, whose signature appears below, has been authorized to sign all documents in connection with this Tender on behalf of (Name of Close Corporation)

.....

.....

SIGNED ON BEHALF OF CLOSE CORPORATION:

(PRINT NAME)

IN HIS/HER CAPACITY AS DATE:

SIGNATURE OF SIGNATORY:

WITNESSES: 1.

2.

E. CO-OPERATIVE

A certified copy of the Constitution of the co-operative must be included with the Tender, together with the resolution by its members authoring a member or other official of the co-operative to sign the Tender documents on their behalf.

By resolution of members at a meeting on 20.....

at

Mr/Ms, whose signature appears below, has been authorized to sign all documents in connection with this Tender on behalf of (Name of Co-Operative)

.....

SIGNATURE OF AUTHORIZED REPRESENTATIVE/SIGNATORY:

(PRINT NAME)

IN HIS/HER CAPACITY AS

DATE:

SIGNED ON BEHALF OF CO-OPERATIVE:

NAME IN BLOCK LETTERS:

WITNESSES: 1.

2.

F. JOINT VENTURES

If a tenderer is a joint venture, a certified copy of the resolution/agreement passed/reached signed by the duly authorised representatives of the enterprises, authorising the representatives who sign this tender to do so, as well as to sign any contract resulting from this tender and any other documents and correspondence in connection with the tender and/or contract on behalf of the joint venture must be submitted with this tender, before the closing time and date of the tender.

Authority to sign on behalf of the Joint Venture:

By resolution/agreement passed/reached by the joint venture partners on 20

Mr/Mrs, Mr/Mrs

Mr/Mrsand Mr/Mrs

(whose signatures appear below) have been duly authorised to sign all documents in connection with this tender on behalf of:

(Name of Joint Venture)

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

In his/her capacity as:

Signed on behalf of (COMPANY NAME):
(PRINT NAME)

Signature Date:

G. CONSORTIUM

If a tenderer is a consortium, a certified copy of the resolution/agreement passed/reached signed by the duly authorised representatives of the enterprises, authorising the representatives who sign this tender to do so, as well as to sign any contract resulting from this tender and any other documents and correspondence in connection with the tender and/or contract on behalf of the consortium must be submitted with this tender, before the closing time and date of the tender.

Authority to sign on behalf of the consortium:

By resolution/agreement passed/reached by the consortium partners on20

Mr/Mrs ,

(whose signature appear below) have been duly authorised to sign all documents in connection with this tender on behalf of:

(Name of Consortium)

In his/her capacity as:

Signature Date:

T2.2.2 REGISTRATION CERTIFICATE / AGREEMENT / ID DOCUMENT

Important note to Tenderer: The relevant supporting documents to the organization tendering i.e. Registration Certificates for Companies, Close Corporations and Partnerships, or Agreements and Powers of Attorney for Joint Ventures and Consortiums, or ID documents for Sole Proprietors, all as referred to in the foregoing forms and in T2.1, must be inserted here.

INSERT HERE

T2.2.3 TAX COMPLIANCE STATUS LETTER REQUIREMENTS

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

- Bidders must ensure compliance with their tax obligations.
- Bidders are required to submit their unique personal identification number (pin) issued by SARS to enable the organ of state to verify the taxpayer's profile and tax status.
- Application for Tax Compliance Status (TCS) pin may be made via e-filing through the SARS website www.sars.gov.za.
- Bidders may also submit a printed TCS certificate together with the bid.
- In bids where consortia / joint ventures / sub-contractors are involved, each party must submit a separate TCS certificate / pin / CSD number.
- Where no TCS is available but the bidder is registered on the Central Supplier Database (CSD), a CSD number must be provided.
- 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 in the service of the state.

T2.2.4 TAX COMPLIANCE STATUS LETTER REQUIREMENTS (Continued.....)

[Tax Compliance Status (TCS) Letter *obtained from SARS to be inserted here*]

T2.2.4 CENTRAL SUPPLIER DATABASE (CSD) FULL REPORT (NOT OLDER THAN 3 MONTHS)

[INSERT HERE]

T2.2.5 DETAILS OF REGISTRATION WITH CIDB

Attach hereto a valid CIDB Registration Certificate.

[INSERT HERE]

T2.2.6

LETTER OF GOOD STANDING IN TERMS OF COID ACT
(Compensation for Occupational Injuries and Diseases Act)

[INSERT HERE]

T2.2.7 PROOF OF PUBLIC LIABILITY INSURANCE

[INSERT HERE]

T2.2.8 MUNICIPAL ACCOUNT/ RATES SETTLEMENT

The Tenderer shall attach one of the following to this page (as applicable):

1. An original/certified copy of the most recent municipal certificate, indicating the status of payment of all municipal accounts and taxes i.e. electricity, water, refuse, rates and levies, from the Municipality in which jurisdiction its business is situated.
2. In the case where the Tenderer does not own property/is a tenant for the purpose of its business establishment, the Tenderer to provide an original/certified copy of a certificate from its landlord certifying that all tenants payments in respect of all municipal accounts and taxes i.e. electricity, water, refuse, rates and levies are paid up to date.
3. In the case where it is not possible for a Tenderer to obtain the certificate in (2) above from its landlord, the Tenderer is required to submit an original/certified copy of the lease agreement for the premises where its business is situated.

(Failure to do so may lead to your Tender being disqualified)

This serve to confirm that my rates with _____ municipality are up to date and have attached my municipal rates account as proof.

NAME OF BIDDER: _____

DATE : ____/____/____

This serves to confirm that my municipal rates with _____ municipality are not up to date.

I have made arrangement to settle this account by _____ **(ATTACH LETTER OF ARRANGEMENT AS PROOF)**

I intend to settle my account in full within ten (10) working days should I be favoured by uMKHANYAKUDE DISTRICT MUNICIPALITY as a preferred bidder.

NAME OF BIDDER: _____ **Signature:** _____

DATE : ____/____/____

[INSERT HERE]

T2.2.9 FORM OF INTENT TO PROVIDE A PERFORMANCE GUARANTEE

[The Tenderer must attach hereto a letter from the bank or institution. with whom he has made the necessary arrangements, to the effect that the said bank or institution will be prepared to provide the required performance guarantee forthwith upon award of the contract to this tenderer].

Tenderers are to refer to Form C1.3: Form of Guarantee.

[INSERT HERE]

T2.2.10 PROOF OF ATTENDANCE AT THE COMPULSORY CLARIFICATION MEETING**CERTIFICATE OF ATTENDANCE**

TENDER No. SCMU 001/2026/2027

This is to certify that

(Tenderer)

of (address)

.....

.....

was represented by the person(s) named below at the compulsory meeting held for all Tenderers at (location)

..... on (date)

starting at (time)

I / 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: Date and Time:

T2.2.11**COMPULSORY ENTERPRISE QUESTIONNAIRE**

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number:

Close corporation number: Tax reference number:

Section 6: Record in the service of the state

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

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

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

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

Insert separate page if necessary

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

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

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

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

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

*insert separate page if necessary

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

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

Signed:

Date:

Name:

Position:

Enterprise name:

T2.2.12 DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-

- the bidder is employed by the state; and/or
- the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

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

2.1 Full Name of bidder or his or her representative:

2.2 Identity Number:

2.3 Position occupied in the Company (director, trustee, shareholder²):

2.4 Company Registration Number:

2.5 Tax Reference Number:

2.6 VAT Registration Number:

- 2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

¹"State" means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

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

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

- 2.7.1 If so, furnish the following particulars:

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

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

employed:

Position occupied in the state institution:

T2.41.

Any other particulars:

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

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attached proof of such authority to the bid document? **YES / NO**

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

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

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

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

2.8.1 If so, furnish particulars:

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

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

2.9.1 If so, furnish particulars.

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

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

2.10.1 If so, furnish particulars.

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

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

2.11.1 If so, furnish particulars:

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

3 Full details of directors / trustees / members / shareholders

Full Name	Identity Number	Personal Tax Reference Number	State Employee Number / Persal Number

4 DECLARATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

T2.2.13 DECLARATION OF 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:

Item	Question	Yes	No
1	Are you by law required to prepare annual financial statements for auditing?	Yes ☐	No ☐
1.1	If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years		
2	Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?	Yes ☐	No ☐
2.1	If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days		
2.2	If yes, furnish particulars		
3	Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?	Yes ☐	No ☐
3.1	If yes, furnish particulars		
4	Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion Of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	Yes ☐	No ☐
4.1	If yes, furnish particulars		

CERTIFICATION

I, THE UNDERSIGNED (NAME)

CERTIFY THAT THE INFORMATION IN THIS DECLARATION IS CORRECT.

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

.....
Signature

.....
Date

.....
Position

.....
Name of bidder

T2.2.14 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

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

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF SPECIFIC GOALS, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022.

GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

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

1.2 The value of this bid is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the 90/10 preference point system shall be applicable.

1.3 Preference points for this bid shall be awarded for:

(a) Price; and

(b) Specific goals

1.4 The maximum points for this bid are allocated as follows:

	POINTS
PRICE	90
SPECIFIC GOALS OF CONTRIBUTION	10
Total points for Price and Specific Goals must not exceed	100

1.5 Failure of a bidder to submit proof of specific goals claimed will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

DEFINITIONS

- (a) **“all applicable taxes”** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **“bid”** 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 and “bid” has a corresponding meaning
- (c) **“comparative price”** means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;
- (d) **“consortium or joint venture”** 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;
- (e) **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- (f) **“EME”** means an Exempted Micro Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (g) **“Firm price”** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- (h) **“non-firm prices”** means all prices other than “firm” prices;
- (i) **“person”** includes a juristic person;
- (j) **“QSE”** means a Qualifying Small Enterprise as defines by Codes of Good Practice issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (k) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of the tender invitation;
- (l) **“Reconstruction and Development Programme”** the Reconstruction and Development Programme as published in Government Gazette No. 16085 dated 23 November 1994;
- (m) **“specific goals”** means specific goals as contemplated in section 2(1)(d) of the Act which may include contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender and disability including the

implementation of programmes of the Reconstruction and Development Programme as published in Government Gazette No. 16085 dated 23 November 1994;

- (n) **“total revenue”** bears the same meaning assigned to this expression in the Codes of Good Practice;
- (o) **“trust”** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- (p) **“trustee”** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
- (q) **“Disability”** means, in respect of a person, a permanent impairment of a physical, intellectual, or sensory function, which results in restricted, or lack of, ability to perform an activity in the manner, or within the range, considered normal for a human being.
- (r) **“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.

ADJUDICATION USING A POINT SYSTEM

- 1.7 If two or more tenderers score an equal total number of points, the contract must be awarded to the tenderer that scored the highest points for specific goals.
- 1.8 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts;
- 1.9 Points scored must be rounded off to the nearest 2 decimal places.
- 1.10 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for specific goals.
- 1.11 If two or more tenderers score equal total points in all respects, the award must be decided by the drawing of lots.

POINTS AWARDED FOR PRICE

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

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

80/20	or	90/10	
$P_s = 80\{1 - \frac{P_t - P_{min}}{P_t - P_{min}}\}$	or	$P_s = 90\{1 - \frac{P_t - P_{min}}{P_t - P_{min}}\}$	
P_{min}		P_{min}	

Where

Ps	=	Points scored for comparative price of bid under consideration
Pt	=	Comparative price of bid under consideration
Pmin	=	Comparative price of lowest acceptable bid

POINTS AWARDED FOR LEVEL OF CONTRIBUTION TOWARDS SPECIFIC GOALS

- 1.13 In terms of s2(b)(i) and (ii) of the Preferential Procurement Regulations Policy Framework Act, a preference points system must be followed for contracts with a Rand value above a prescribed amount a maximum of 10 or 20 points may be allocated for specific goals as contemplated in s2(d) of the Act provided that the lowest acceptable tender scores 90 or 80 points for price, respectively, in accordance with the table below:

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

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

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

90/10 preference point system			
The specific goals allocated points in terms of this tender	Number of points allocated (10 points) (To be completed by the Municipality)	Proof required to Claim (20 points) (To be completed by the Municipality)	Number of points Claimed (20 points) (To be completed by the tenderer)
Refer to the table below	10	Fully completed and signed MBD 6.1; and full Central Suppliers Data Base report (CSD) not older than one month	10

NB: No points will be claimed by the bidder if it fails to submit proof required to score points for specific goals

PREFERENCE POINT SYSTEM		
PRICE SPECIFIC GOALS	90 10	Requirements to claim points
Enterprise owned by Black People ≥ 51%	2	Certified ID Copies (Directors)/ CSD Report/ Shareholders Certificate
Enterprise owned by Women ≥ 51%	2	Certified ID Copies (Directors)/ CSD Report/ Shareholders Certificate
Enterprise owned by Youth	2	Certified ID Copies (Directors)/ CSD Report/ Shareholders Certificate
Enterprise owned by Disabled Persons	2	Medical Certificate
Enterprise owned by SMMEs- QSE and EME	2	CSD report/ Proof of municipal accounts/ affidavit/ proof of residence signed by Ward Councillor (for those residing in rural areas/ lease agreement

- 1.14 Bidders must submit valid proof for specific goals
- 1.15 If the municipality is of the view that a tenderer submitted false information regarding a specific goal, will —
- (a) inform the tenderer accordingly; and
 - (b) give the tenderer an opportunity to make representations within 14 days as to why the tender may not be disqualified or, if the tender has already been awarded to the tenderer, the contract should not be terminated in whole or in part.
- 1.16 After considering the representations referred to in sub regulation (1)(b), the municipality may, if concludes that such information is false—
- (a) disqualify the tenderer or terminate the contract in whole or in part; and
 - (b) if applicable, claim damages from the tenderer.

SPECIFIC GOALS CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1

Specific goals: = (maximum of 10 or 20 points)

(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of the required proof of specific goals.

SUB-CONTRACTING

- 1.17 Will any portion of the contract be sub-contracted?
(*Tick applicable box*)

YES		NO	X
-----	--	----	---

- 1.17.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted..... %
- ii) The name of the sub-contractor.....
- iii) Whether the sub-contractor is an EME.

(*Tick applicable box*)

YES		NO	X
-----	--	----	---

DECLARATION WITH REGARD TO COMPANY/FIRM

- 1.18 Name of company/firm:.....
- 1.19 VAT registration number:.....

T2.50.

1.20 Company registration number:.....

1.21 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

1.22 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

1.23 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional service provider
- ☐ Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

MUNICIPAL INFORMATION**Municipality where business is situated:****Registered Account Number:****Stand Number:**

1.24 Total number of years the company/firm has been in business:

1.25 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goal declared in paragraph 6 , indicated in paragraph 7, qualifies the company/ firm for the preference(s) shown and I / we 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 paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may:
- a. disqualify the person from the bidding 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. restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, 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.

WITNESSES

1.

2.

.....

SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS

.....

.....

MBD6.2**T2.2.15 DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS**

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

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

1. General Conditions

- 1.1. Preferential Procurement Regulations, 2011 (Regulation 9) makes provision for the promotion of local production and content.
- 1.2. Regulation 9.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3. Where necessary, for bids referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

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

Where

x is the imported content in Rand

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

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

The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial development/ip.jsp](http://www.thedti.gov.za/industrial%20development/ip.jsp) at no cost.

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

2. Definitions

- 2.1. **“bid”** includes written price quotations, advertised competitive bids or proposals;
- 2.2. **“bid price”** price offered by the bidder, excluding value added tax (VAT);
- 2.3. **“contract”** means the agreement that results from the acceptance of a bid by an organ of state;
- 2.4. **“designated sector”** means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;
- 2.5. **“duly sign”** means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).
- 2.6. **“imported content”** means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;
- 2.7. **“local content”** means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;
- 2.8. **“stipulated minimum threshold”** means that portion of local production and content as determined by the Department of Trade and Industry; and
- 2.9. **“sub-contract”** means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.
3. **The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:**

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
_____	_____ %
_____	_____ %
_____	_____ %

T2.54.

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

YES		NO	
-----	--	----	--

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

The relevant rates of exchange information is accessible on www.reservebank.co.za

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

Currency	Rates of exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

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

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

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

IN RESPECT OF BID NO.

ISSUED BY: (Procurement Authority / Name of Municipality / Municipal Entity):

.....
NB

- 1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.
- 2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on <http://www.thedti.gov.za/industrialdevelopment/ip.jsp>. Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, (full names),
do hereby declare, in my capacity as

T2.55.

of(name of bidder entity), the following:

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

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

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

- (d) I accept that the Procurement Authority / Municipality /Municipal Entity has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 13 of the Preferential Procurement Regulations, 2011 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

SIGNATURE: _____

DATE: _____

WITNESS No. 1 _____

DATE: _____

WITNESS No. 2 _____

DATE: _____

MBD8**T2.2.16 DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES****(To be completed by Tenderer)**

- 1 This Section must form part of all Tenders invited.
- 2 It serves as a declaration to be used by Umkhanyakude District Municipality 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 Tender of any Tenderer may be disregarded if such Tenderer, or any of its directors have-
 - a. abused Umkhanyakude District Municipality '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 Tender.**

T2.57.

Item	Question	Yes	No
4.1	Is the Tenderer or any of its directors listed on the National Treasury/Umkhanyakude District Municipality's database as companies or persons prohibited from doing business with the public sector?	Yes ☐	No ☐
4.1.1	If so, furnish particulars		
4.2	Is the Tenderer or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? (To access this Register enter the National Treasury's website, www.treasury.gov.za , click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).	Yes ☐	No ☐
4.2.1	If so, furnish particulars		
4.3	Was the Tenderer 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 Tenderer 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		

T2.58.

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

T2.2.17 CERTIFICATE OF INDEPENDENT BID DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids¹ invited.

2. Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.

3., Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:

- a take all reasonable steps to prevent such abuse;
- b reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
- c cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.

4. This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 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.

T2.2.16 CERTIFICATE OF INDEPENDENT TENDER DETERMINATION (continued)

I, the undersigned, in submitting the accompanying tender:

.....
(Bid Number and Description)

in response to the invitation for the tender made by:

.....
(Name of Municipality / Municipal Entity)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: that:
(Name of Bidder)

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the tenderer to sign this Certificate, and to submit the accompanying tender, on behalf of the tenderer;
4. Each person whose signature appears on the accompanying tender has been authorized by the tenderer to determine the terms of, and to sign the tender, on behalf of the tenderer;
5. For the purposes of this Certificate and the accompanying tender, I understand that the word "competitor" shall include any individual or organization, other than the tenderer, whether or not affiliated with the tenderer, who:
 - (a) has been requested to submit a tender in response to this tender invitation;
 - (b) could potentially submit a tender in response to this tender invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer
6. The tenderer has arrived at the accompanying tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium³ will not be construed as collusive tendering.
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 tender;
 - (e) the submission of a tender which does not meet the specifications and conditions of the tender; or
 - (f) tendering with the intention not to win the tender.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this tender invitation relates.
9. The terms of the accompanying tender have not been, and will not be, disclosed by the tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract.

T2.61.

10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

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.

.....
Signature

.....
Date

.....
Position

.....
Name of Tenderer

T2.2.18 TENDERER'S HEALTH AND SAFETY DECLARATION

In terms of the Occupational Health and Safety Act (OHSA) 85 of 1993 and specifically the Government Notice No.R84 of 7 February 2014 by Department of Labour comprising the Construction Regulations 2014 (hereafter referred to as "the Regulations"), the Professional Services Provider appointed in terms of this tender assumes the role of the "Designer" as defined by the Regulations.

The Regulations impose duties on the Designer with regard to the design of both permanent and temporary works contemplated in terms of the Scope of Work outlined in C3. To that effect a person duly authorized by the Tenderer shall 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), and the Construction Regulations, 2014 contained in Government Notice No. R 84.
2. I hereby declare that my company / enterprise has the competence and the necessary resources to carry out the design work contemplated under this contract with due regard to the "Duties of Designer" outlined in Regulation 6 and to achieve compliance with the Regulations and the Employer's Health and Safety Specifications.
3. I hereby undertake, if my Tender is accepted, to comply with the requirements of the Regulations as they apply to the Designer and also as they apply to any other duties that, by agreement, may be delegated to me by the Employer. I hereby agree that my company/enterprise will not have a claim for compensation for delay or extension of time because of my failure to comply with these requirements.
4. I hereby confirm that adequate provision has been made in my Tendered rates and prices in the Pricing Schedule (C2) to cover the cost of all resources, actions, training and all health and safety measures envisaged for the designer in the Regulations.
5. I hereby confirm that I will be liable for any penalties that may be applied by the Employer in terms of the Contract Data (C1.2 Clause 3.12) for failure on my part to comply with the provisions of the Act and the Regulations.
6. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the Regulations, and accept that my Tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE: DATE:

NAME (Print)

(of person authorized to sign on behalf of the Tenderer)

T2.2.19 CONTRACT PARTICIPATION GOALS

Objective

The objective of Umkhanyakude District Municipality's empowerment initiative is to bring about meaningful transformation in all procurement projects and in particular in the built environment / construction and consulting industry through achieving one or more of the following objectives:

- Meaningful Economic Participation;
- Local Economic Development;
- Transfer of Technical, Management and Entrepreneurial Skills; and
- Creation of sustainable Black Enterprises

Contract Participation Goals

Contract Participation Goal (CPG) – the **final** value of services paid to the CPG Partner/s based on the **final** contract value.

At the time of awarding the contract the 30% minimum CPG amount will be based on the value of the works exclusive of the following:

- VAT, CPA, Provisional Sums and Contingencies.

During contract implementation, adjustments relating to Provisional Sums and Contingencies linked to the CPG allocation will be agreed upon between the parties to the contract, as and when the need arises.

CPG Partner/s – Umkhanyakude District Municipality will provide or arrange a CPG Partner/s to work with the successful company whom are primarily and geographically based within the Jozini Local Municipal Area, and alternatively within Umkhanyakude District Municipal area of jurisdiction if not identified from primary area to support local economic development and skills growth.

Tenderers are required to achieve at least 30% Contract Participation Goals (CPG) including a minimum 10% Black Women participation and another 10% for Local participation of the value of goods, services and Works paid to one or more enterprises (CPG Partner/s)

- 30% includes any special materials
- 30% excludes VAT, CPA, Provisional Sums and Contingencies.
- The tenderer will be required to achieve the actual Rand value committed for CPG, adjusted according to the following:
 - Variation Orders – Each VO will be evaluated by the Employer's Agent and the Project Manager to determine whether it should be counted, in its entirety or partially, as part of CPG or not.
 - Re-measurable Items (including CPA, and provisional sums) – Each re-measurable item change will be evaluated by the Employer's Agent and the Project Manager to determine whether it should be counted as part of CPG or not.

Within 2 weeks of the award of contract, the tenderer will be required to submit a cash flow projection for the main contractor and the CPG Partner/s

Applicability

The CPG target is applicable to all contracts to be adjudicated through the Umkhanyakude District Municipality procurement process and shall be achieved through the following mechanisms:-

- CPG Partner/s selection is concluded **after** adjudication of tenders and **before** contract award is made.
- The CPG Partner/s shall be selected according to the following criteria:
 - CPG Partner/s are to be obtained from Umkhanyakude District Municipality's database of Service Providers specifically earmarked for CPG purposes.

- In the event of services where Umkhanyakude District Municipality does not have an applicable service provider on its database, the tenderer may propose a suitable CPG Partner/s for consideration by Umkhanyakude District Municipality.
- Main service provider may propose a suitable CPG Partner/s, but Umkhanyakude District Municipality reserves the right to provide or arrange a CPG Partner/s to work with the successful company.
- Sub-contracting of the CPG Partner/s at the same rate / price that the tenderer would have offered to Umkhanyakude District Municipality whilst making profit margins consistent to the profit margins that the main Service Provider would have made under normal trading processes.
- Value of the work to be sub contracted shall be at least **30% (minimum of 10% shall be due to Black Women participation and another 10% for Local participation)** of the total contract value excluding VAT, CPA and Contingencies.
- CPA is payable to the CPG Partner/s as per the indices stipulated in the contract document.
- The work allocated to the CPG Partner shall be performed by the CPG Partner directly and may not be allocated or sub-contracted out to other contractors/consultants/service providers.
- The main Service Provider **shall not** substitute any CPG Partner/s without the written approval of Umkhanyakude District Municipality.
- The working capital arrangements between the main Service Provider and the CPG Partner/s must be agreed upon between the two parties prior to commencement of works to ensure that the CPG Partner does not have cash flow challenges during contract implementation.

Invoicing and Payment

The monthly measurement and payment will be according to the following guideline:

- Submission of payment certificate by the Service Provider– by 30th of each month, or the nearest previous working day. The submission from the Service Provider shall include the signature of the CPG Partner indicating agreement with the measurements and rates applicable to the work undertaken by the CPG Partner.
- Payment to the Service Provider – on the last day of the following month;
- The CPG Partner must be paid within reasonable time but no later than 3 working days after the Main Service Provider has been paid by Umkhanyakude District Municipality; and
- The submission from the Service Provider must include a schedule that clearly shows the following:
 - Total Contract Sum
 - Total amount payable to CPG Partner/s excluding current month
 - Amount payable to CPG Partner for current month
 - % split of Total amount payable to Main Service Provider and CPG Partner/s

Monitoring and Reporting on CPG

- Umkhanyakude District Municipality will monitor CPG implementation on site. This may include direct contact with CPG Partner/s on site for verification purposes.
- The CPG Partner shall be in agreement with the measurement and payment for work completed, for the purposes of submitting payment certificates, as determined by the Service Provider. Should disagreements arise, Umkhanyakude District Municipality reserves the right to intervene to resolve the disagreement.
- CPG Partner/s shall attend all contractual meetings relevant to their scope of work including contract award negotiations, monthly contract site meetings and technical meetings where applicable.

Eligibility Criteria

For tenders where the CPG target is applicable, those that do not offer a **minimum** CPG participation of **30%** (including minimum 10% Black Women participation and another 10% for Local participation) according to the requirements mentioned above, will be deemed **ineligible**.

DECLARATION REGARDING CONTRACT PARTICIPATION GOALS

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

UMKHANYAKUDE DISTRICT MUNICIPALITY

do hereby make the following declaration and certify the statements contained herein 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 Declaration and the fully completed bid document accompanying this declaration;
2. I understand and declare that the accompanying bid will, and must, be disqualified if this Declaration is found not to be true and complete in every respect;
3. I understand and declare that in the event that this bid is successful, I will be required to, and shall, fully implement the commitments that are submitted with this bid, in particular regarding the Bidder's contract participation goals and commitments towards the allocation of certain portion of the contract to small and emerging entities. Failure to implement such commitments as outlined in the bid document (in particular, as detailed in the bill of quantities) and or failure to provide the relevant information within the prescribed period as determined in the Letter of Intention to Award the Bid, shall automatically disqualify this bid from further consideration and the Employer has the right to, and must, then award the bid to the next highest ranked bidder; and as a result I or the bidder or any of its directors shall have no recourse against Umkhanyakude District Municipality.
4. I am authorized by the bidder to sign this Declaration, and to submit the accompanying bid, on behalf of the bidder;
5. 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;

T2.66.

-
6. I am aware that, and do consent to, the disqualification of my or the bidder's future bids with Umkhanyakude District Municipality in the event that the commitments made herein are not fulfilled and that such non-fulfillment amounts to abuse of Umkhanyakude District Municipality's supply chain policies and procedures and/or empowerment objectives which must be penalized, over and above the contractual sanctions as agreed to in line with the contract signed with Umkhanyakude District Municipality, with a sanction of restricting me and or my company (the bidder) and or any of its directors from conducting business with Umkhanyakude District Municipality for a period not exceeding ten (10) years.
7. I consent that should my company (the Bidder) deviate from the commitments and the spirit of the CPG objectives as agreed to, shall amount to a repudiation of the contractual arrangement between the two parties (Umkhanyakude District Municipality and the Bidder); and Umkhanyakude District Municipality shall have the right to terminate the contract with immediate effect and without giving my company (the Bidder) prior notice to remedy the breach.

Full Names & Surname
(Duly authorized)

Signature

Date

Position

Name of Bidder

The experience of the Tenderer or joint venture partners in the case of an unincorporated joint venture or consortium will be evaluated on the basis of experience in similar projects or similar areas and conditions in relation to the scope of work. Before compiling the company's experience, the Tenderer shall familiarise himself with the evaluation criteria listed on Page T2.25 and submit only projects relevant to the functionality score for assessment.

The summary table below is for information only. If a separate table is prepared, it shall be put in tabular form with the same headings.

[illegible]

T2.68.

TENDERER'S EXPERIENCE (Continued)

[INSERT HERE]

T2.2.21

BANK RATING

[INSERT HERE]

T2.2.22**KEY PERSONNEL & EXPERIENCE OF KEY PERSONNEL**

In terms of the Scope of Work and the Conditions of Tender, unskilled workers may only be brought in from outside the local community if such personnel are not available locally.

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. Full names must be provided for at least the first three rows.

CATEGORY OF EMPLOYEE	NAMES AND/OR 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
Project Director / Contract Manager			
Construction Manager			
Site Supervisor, Quality Control			
Health & Safety Officer			
Artisans and other Skilled workers			
Plant Operators			
Unskilled Workers			
Others:.....			

The Tenderer shall attach hereto the *curricula vitae*, in the form included hereafter, of at least the Construction Manager. The information is necessary for evaluation of the tender.

EXPERIENCE OF KEY PERSONNEL

Provide relevant information (CV's) as prescribed below for each of the Key Personnel proposed in Section T2.2.9.

For the purpose of functionality evaluation, the Employer regards the experience of the following Key Personnel as critical to project success and these personnel will be scored for functionality.

The experience of each key person, relevant to the scope of work, will be evaluated from the points below:

- 1) General experience (total duration of activity), level of education and training and positions held by the key person.
- 2) The education, training and experience of the person, in the specific sector, field, subject, etc which is directly linked to the scope of work.

A CV (**not more than 3 pages**) in the required format below, shall be provided for each key person. This should be attached to this schedule. Note that Copies of Qualification and Professional Registration Certificates should be attached separately.

Each CV of the Key Personnel ONLY should be structured under the following headings:

1. Personal particulars
 - name
 - date of birth
 - place (s) of tertiary education and dates associated therewith
2. Qualifications
3. Name of current employer and position in Company
4. Overview last 10 years of experience (year, organization, position and projects)
5. Outline of recent assignments / experience that have a bearing on the scope of work for this tender and the scoring criteria below. The outline shall include start and finish dates of the assignments

The scoring of the experience of Key Personnel shall be as follows:[17%]

EXPERIENCE OF KEY PERSONNEL (Continued)

INSERT KEY PERSONNEL's SIGNED CVs AND CERTIFIED QUALIFICATIONS HERE

T2.2.23**QUALITY MANAGEMENT SYSTEM**

Proof of valid Quality Management System certification to ISO 9001:2015 accreditation. The Quality Management System certificate must be valid at time of tendering to qualify for scoring points. No renewal letters/notifications/letters of intent/declarations will be accepted. Only valid accreditation certificate

[INSERT HERE]

T2.2.24 QUALITY SCORE CARD

Points for quality must be entered here **by the Tenderer** based on the following Quality Scorecard. **Only Tenderers scoring 65% or more for quality will be considered eligible for evaluation.**

Tenderers should supply supporting information to prove points claimed where it's not available in other Returnable Schedules.

1) Criteria 1: Experience Applicable to last 5 years only: Maximum Score = 15

	List below up to 5 contracts of similar work undertaken as main contractor within the last 5s year Projects listed must be selected from those listed in previous Section G1a and/or G1b of T2.2.1					Value/Size of Individual Contracts	Points	Score (S)
	Contract	Value	Reference					
			Name	Organisation	Tel N°			
1.1						< R9 million	0	
1.2						R9 – 12 million	1	
1.3						R12 - 18 million	2	
1.4						> R18 million	3	
1.5								
1.6	Possible Full Points =						15	
1.7	Actual Points Obtained S1 =							

Note: 1. *Similar work (or Project) means Water pipelines and reservoirs.*

2. *The Employer will send the "Assessment of Performance" form (see example G3) to two or more of the five references listed here. Two replies will then be used to score Criteria 5a and 5b on Pages T2.61 and T2.62.*

T2.75.

2) Criteria 2: Financial Resources (Bank Rating): Maximum Score = 16

2.	Score one of the ratings listed below as reflected on rating received – see Section E1 of T2.2.1	Points	Score (S)
2.1.	Bank Rating A – Undoubted for the amount of enquiry	16	
2.2	Bank Rating B – Good for the amount of enquiry	12	
2.3	Bank Rating C – Good for the amount quoted if applied strictly in the way of business	9	
2.4	Bank Rating D – Fair trade for the amount of enquiry	5	
2.5	Bank Rating E – Figures considered too high Bank Rating F – Financial Position Unknown Bank Rating G – Dishonour on records Bank Rating H – Frequently Dishonoured	Not eligible to tender	
2.6	Possible Full Points =	16	
	Actual Points Obtained S2 =		

Note: Tenderers are to submit a copy of their bank rating in Section E of T2.52

3) Criteria 3: Experience of Key Personnel:**Maximum Score = 17**

	Proposed key Personnel	Experience	Points	Score (S)
3.1	Project Director Name:	Professional Registration with ECSA and/or SACPCMP with min 5 years relevant experience in similar works	2	
		Years of appropriate experience (score one of the categories)	<5	0
			5 to 10	1
			>10	2
3.2	Construction Manager Note the Construction Manager may not be the same person as the Project Director Name:	Professional Registration with ECSA and/or SACPCMP	2	
		Recognised Degree or Diploma in Civil Engineering with min 5 years relevant experience in similar works	2	
		Years of appropriate experience (score one of the categories)	<5	0
			5 to 10	1
3.3	Site Supervisor Note the Site Supervisor may not be the same person as the Construction Manager Name:	Recognised Degree or Diploma in Civil Engineering with min 5 years relevant experience in similar works	2	
		Years of appropriate experience (score one of the categories)	<5	0
			5 to 10	1
			>10	2
3.4	Total number of full time skilled workers and artisans assigned (in addition to Project Director, Construction Manager and Site Supervisor)		0	
			1	1
		(score one of the categories)	2	2
			>2	3

T2.77.

	Proposed key Personnel	Experience	Points	Score (S)
3.5	Possible Full Points =		17	
3.6	Actual Points Obtained S3 =			

Note: *Curricula Vitae to be attached in Section: Key Personnel of T2.2.22.*

Years of appropriate experience means experience in the construction of welded steel pipelines.

Wherever points are claimed certified copies of Registration, Degrees or Diplomas to be attached as applicable. Failure to attach such information will result in nil score being recorded

4) Criteria 4: Quality Assurance Plan and Control Procedures: Maximum Score = 10

4	Score one status as listed below	Points	Score (S)
4.1	ISO Accreditation	10	
4.2	Own Internal QA Plan	6	
4.3	None	0	
4.4	Possible Full Points =	10	
4.5	Actual Points Obtained S4 =		

Note: If 4.1 selected, attach current copy of ISO Accreditation Certificate.

If 4.2 selected attach copy of company Quality Assurance Plan.

Failure to attach such information will result in nil score being recorded

5) Criteria 5: Performance on Two Similar Projects undertaken within the last 5 years: Maximum Score = 42

Note:

The two projects scored here will be selected and scored by the Employer from the five projects listed in Criteria 1

Experience The Contractor will send form G3 to two or more of the five references listed in Criteria 1.

The Employer will then utilise the returned completed pages (to be attached herewith) and score based on the reference responses received.

EVALUATION SCHEDULE: CLIENT REFERENCES

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Similar Relevant Experience” returnable schedule. Client References” scorecards will be completed by each of the respective Clients for the projects listed in the “Similar Relevant Experience” returnable schedule. Forms not signed, stamped and completed by the client will result in no allocation of points (zero points).

TO BE SUBMITTED BY THE CONTRACTOR TO THEIR PREVIOUS EMPLOYER FOR COMPLETION, AND RETURNED HERewith

The following are to be **completed by the Client**:

PROJECT 1: Name & Scope –

Client Department:

Contract Amount:

Contract Duration:.....

Actual Contract Duration:

	Qualitative Statements as assessed by Referees (refer to returned forms H3)	Points	Score
5a.3	“Contractor’s Management was adequate for the contract”		
5a.4	“Contractor provided suitably qualified Site personnel”	Not true 0	
5a.5	“Contractor complied with Health & Safety requirements”	Partially fulfilled 1	
5a.6	“Contractor’s provided adequate resources for the contract”	Substantially fulfilled 2	
5a.7	“Contractor’s communication and compliance to instructions was good”	Completely fulfilled 3	
5a.8	“Quality of work produced was to drawings and specification”	(Score from returned reference sheet H3)	
5a.9	“Contract was completed on time”		

T2.80.

5a.10	Possible Full Points	21	
5a.11	Actual Points Obtained S5a =		

Any other remarks to be considered necessary to assist in evaluation of the contractor?

.....

.....

.....

Name of Client Representative:

Designation:

Telephone:

Client Signature: Date:

Stamp

T2.81.

The Tenderer shall provide details of his performance on each of the previous projects listed in the “Similar Relevant Experience” returnable schedule. Client References” scorecards will be completed by each of the respective Clients for the projects listed in the “Similar Relevant Experience” returnable schedule. Forms not signed, stamped and completed by the client will result in no allocation of points (zero points).

TO BE SUBMITTED BY THE CONTRACTOR TO THEIR PREVIOUS EMPLOYER FOR COMPLETION, AND RETURNED HERewith

The following are to be **completed by the Client**:

PROJECT 2: Name & Scope –

Client Department:

Contract Amount:

Contract Duration:.....

Actual Contract Duration:

	Qualitative Statements as assessed by Referees (refer to returned forms G3)	Points	Score
5b.3	“Contractor’s Management was adequate for the contract”	Not true 0 Partially fulfilled 1 Substantially fulfilled 2 Completely fulfilled 3 (Score from returned reference sheet H3)	
5b.4	“Contractor provided suitably qualified Site personnel”		
5b.5	“Contractor complied with Health & Safety requirements”		
5b.6	“Contractor’s provided adequate resources for the contract”		
5b.7	“Contractor’s communication and compliance to instructions was good”		
5b.8	“Quality of work produced was to drawings and specification”		
5b.9	“Contract was completed on time”		

T2.82.

5b.10	Possible Full Points	21	
5b.11	Actual Points Obtained S5b =		

Any other remarks to be considered necessary to assist in evaluation of the contractor?

.....

.....

.....

Name of Client Representative:

Designation:

Telephone:

Client Signature: Date:

Stamp

T2.83.

Total Score for Quality
TO BE COMPLETED BY EMPLOYER DURING TENDER EVALUATION

	Criteria	Possible Full Points	Actual Points Obtained
1	Experience applicable to past 5 years	15	S1=
2	Financial Resources	16	S2=
3	Experience of Key Personnel	17	S3=
4	Quality Assurance Plan and Control Procedures	10	S4=
5	Previous Performance on Similar Projects Project 1 Project 2	21 21	S5a= S5b=
6	Total Possible Points	100	Total Points Obtained = % Ta =

To be scored by
Employer

Note: Only Eligible for Evaluation if
Ta ≥ 65%

T2.2.25 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. Umkhanyakude District Municipality 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 - NOT APPLICABLE

PAGE, CLAUSE OR ITEM NO.	PROPOSED AMENDMENT

- [Notes: (1) Proposals for amendments to the General and Special Conditions of Contract are not acceptable, and will be ignored;**
- (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 - NOT APPLICABLE

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) UNCONDITIONAL 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 for a discount may have to be disregarded.]

Signature Date.....

T2.2.26 RECORD OF ADDENDA TO TENDER DOCUMENTS

I / We confirm that the following communications amending the Tender documents that I / we received from Umkhanyakude District Municipality or his representative before the closing date for submission of Tenders have been taken into account in this Tender.

A signed copy of each addendum shall be inserted after this page.

ADDENDUM No	DATE	TITLE OR DETAILS

.....
Signature
(of person authorized to sign on behalf of the Tenderer)

.....
Date

T2.2.7 SCHEDULE OF PLANT AND EQUIPMENT

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

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

DESCRIPTION (type, size, capacity etc)	QUANTITY	YEAR OF MANUFACTURE

Attach additional pages if more space is required

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

DESCRIPTION (type, size, capacity etc)	QUANTITY	HOW ACQUIRED	
		HIRE/ BUY	SOURCE

Attach additional pages if more space is required

The Tenderer undertakes to bring onto site without additional cost to the Employer any additional plant not listed but which may be necessary to complete the contract within the specified contract period.

Failure to complete this form properly and correctly, will lead to the conclusion that the tenderer does not have the necessary plant and equipment resources at his disposal, which will prejudice his tender.

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

DATE:

T2.2.28 PROPOSED SUB CONTRACTORS

I/We hereby notify you that it is my/our intention to employ the following subcontractors for work in this contract.

If I/we am/are awarded a contract I/we agree that this notification does not change the requirement for me/us to submit the names of proposed subcontractors in accordance with requirements of the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

I/We confirm that all subcontractors who are contracted to construct a house or building are registered as home builders with the National Home Builders Registration Council.

NAMES AND ADDRESSES OF PROPOSED SUBCONTRACTORS	COMPANY REGISTRATION No AND CIDB CLASSIFICATION	DESCRIPTION OF WORK TO BE EXECUTED BY SUBCONTRACTOR

[Tenderers are to attach to this page the relative experience of the proposed Sub-Contractors.]

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

DATE:

T2.2.29 PRELIMINARY PROGRAMME

The Tenderer shall detail below or attach a preliminary programme reflecting the proposed sequence and tempo of execution of the main work components. The programme shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of his Tender.

The programme is to include the main / sub-components with associated key milestones and interdependencies including the following:

- Linkage to the activities highlighted in the method statement
- Critical path
- Any slack based on risk associated with individual task
- Resources assigned

The table below may be used for this purpose but is insufficiently detailed to ensure a good functionality score. Alternatively a separate programme may be attached. It is preferred that a separate programme, prepared using project scheduling software is attached.

The contract should note that the contract is required to be completed, commissioned and handed over to the Employer by the date specified in the contract data.

PROGRAMME														
Component / Sub-component	WEEKS / MONTHS													

Note: The programme must be based on the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is listed in supported by a detailed statement to that effect, all as specified in the Tender Data.

[INSERT HERE]

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

DATE:

T2.2.30 PRELIMINARY CASH FLOW

[The Tenderer shall attach a preliminary cash flow reflecting the proposed monthly cash flow in unison with the construction program. The Tenderer shall attach a form that has enough columns to cover the time periods involved in the period for performance of the contract. The program shall be in accordance with the information supplied in the Contract, requirements of the Project Specifications and with all other aspects of this tender.]

Note: The cash flow must be based upon the completion time proposed by the tenderer or as stated elsewhere in this tender document as the case may be.

Pro Forma Cash Flow

CASHFLOW	1	2	3	4	5	6	7	8	9	10
Per Month										
Cumulative										

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

[INSERT HERE]

THE CONTRACT

C1: AGREEMENTS AND CONTRACT DATA

C2: PRICING DATA

C3: SCOPE OF WORK

C4: SITE INFORMATION

C1: AGREEMENTS AND CONTRACT DATA

TABLE OF CONTENTS	PAGE
C1.1 Form of Offer and Acceptance	C1.4
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C1.3 Performance Guarantee.....	C1.18
C1.4 Agreement in Terms of the OHS Act N° 85 of 1993	C1.22
C1.5 Transfer of Rights and Indemnity in terms of GCC 6.10.1.5	C1.24
C1.6 Adjudicator's Certificates	C1.26

C1: AGREEMENTS AND CONTRACT DATA

IMPORTANT NOTE ON C1.1:

ALL Tenderers MUST complete and sign Form A: OFFER (the first page hereafter).

Form B: ACCEPTANCE will be signed by the Employer and then only in the case of the successful Tenderer.

Form C: SCHEDULE OF DEVIATIONS must be signed by the Employer as well as the successful Tenderer after award of the contract.

Form D: CONFIRMATION OF RECEIPT must be signed by the successful Tenderer on receipt of a fully completed original copy of the Agreement including the Schedule of Deviations, if any.

C.1.1 FORM OF OFFER AND ACCEPTANCE

A: OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of ***The COMPLETION OF NONDABUYA WATER SUPPLY SCHEME – WARDS 6, 8, 9, 14 & 19***

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 apart 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 VAT IS:

(in words)

.....
.....Rand;

(in figures) R.....

The Tenderer confirms that he has read the Standard Professional Services Contract referred to in C1.2 Contract Data.

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

Signature(s) *(of persons authorized to sign the acceptance)*

Name(s)

Capacity

For the Tenderer:

(Insert name and address of organization)

.....

Name & Signature of Witness

Date

B: ACCEPTANCE

By signing this part of the 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:

- C.1 Agreement, and Contract Data, (which include this Agreement)
- C.2 Pricing Data, including the Bill of Quantities
- C.3 Scope of Work
- C.4 Site Information
- C.5 Annexures

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts 1 to 5 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto 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, which must be duly signed by the authorized representatives of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any other 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 Service Provider) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

Signature: *(of person authorized to sign the acceptance)*

Name: *(of signatory in capitals)*

Capacity: *(of Signatory)*

Name of Employer: *(organization)* Umkhanyakude District Municipality

Address Harlinger No. 13433, Kingfisher Rd, Mkuze, KwaZulu Natal

Telephone number: 035 573 8600 **Fax number:**

AS WITNESS

Signature:..... **Name:** *(in capitals)*

Date:

C: SCHEDULE OF DEVIATIONS

The extent of deviations from the tender documents issued by Umkhanyakude District Municipality prior to the tender closing date is limited to those permitted in terms of the Tender Data and the Conditions of Tender.

A Tenderer's covering letter will not necessarily 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.

Any other matters 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.

Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

1. **Subject:**
 Details:

2. **Subject:**
 Details:

3. **Subject:**
 Details:

4. **Subject:**
 Details:

5. **Subject:**
 Details:

6. **Subject:**
 Details:

7. **Subject:**
 Details:

By the duly authorized representatives signing this Schedule of Deviations, Umkhanyakude District Municipality 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 change to the terms of the offer agreed by the Tenderer and Umkhanyakude District Municipality 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.

FOR THE TENDERER:

Signature:

Name:

Capacity:

Tenderer: *(Name and address of organization)*

Witness:

Signature:

Name:

Date:

FOR UMKHANYAKUDE DISTRICT MUNICIPALITY

Signature:

Name:

Capacity:

Witness:

Signature:

Name:

Date:

D: CONFIRMATION OF RECEIPT

The Tenderer, (now Service Provider), 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 on this

FOR THE CONTRACTOR:

Signature:

Name:

Capacity:

Signature and name of witness:

Signature:

Name:

C1.2 CONTRACT DATA (INCLUDING SPECIAL CONDITIONS OF CONTRACT)

This services contract is based upon the Standard Professional Services Contract (July 2009) (third Edition of CIDB document 1014), published by the Construction Industry Development Board (see www.cidb.org.za).

Each item of data given below is cross-referenced to the clause in the Conditions of Contract to which it mainly applies.

Special Conditions of Contract

1. National Treasury Central Supplier Database

The successful Tenderer is required to provide proof of registration with the National Treasury Central Supplier Database (CSD) prior to the award of contract.

2. Application of Contract Price Adjustment Factor

Contract Price Adjustment will not be applicable

3. Progress Measurement and Payments

Progress measurement shall take place on or before, but not later than, the 20th of the month, but should the 20th be a 'non-working' day, it shall take place on the last working day prior to the 20th.

Statements, invoices and back-up documentation together with a Payment Certificate shall be submitted to the Employer on or before the 25th of the month for payment not later than the last day of the month following the month in which same were submitted.

PART 1: DATA PROVIDED BY THE EMPLOYER**CONDITIONS OF CONTRACT**

The Conditions of Contract are

- the “General Conditions of Contract” o “The General Conditions of Contract for Construction Works, Third Edition, 2015” published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685 and obtainable from www.saice.org.za; together with
 - o each subsequent corrigendum and erratum thereto, as issued by their publisher up to the Base Date of this Contract;
(collectively hereinafter referred to as GCC 2015); and
- amendments to the GCC 2015 as contained in this Contract Data.

Each party to the Contract shall purchase its own copy of the correct print edition of the GCC 2015 that applies to this Contract (see Note 1 below), available from the publisher:

South African Institution of Civil Engineering
Private Bag X200
Halfway House 1685
South Africa
Tel +27 (0)11 805 5947
www.saice.org.za

NOTES:**Note 1**

GCC 2015 makes several references to the Contract Data. The Contract Data shall take precedence over the GCC 2015 in the interpretation of any ambiguity or inconsistency.

Note 2

Each item of data below is cross-referenced to the Clause in the GCC 2015 to which it applies.

Note 3

The documents forming the Contract are to be taken as mutually explanatory of one another.

Note 4

Certain pro-forma forms and pro-forma agreements contained in the GCC 2015 have been adapted for this particular Contract. Those pro-forma forms and pro-forma agreements contained in the GCC 2015 do not apply where replaced by similar pro-forma forms and pro-forma agreements in this procurement document.

Note 5 The term ‘Employer’s Agent’ in this tender has the same meaning as ‘Engineer’ as used in earlier versions of GCC and still in customary use in the construction industry and shall be understood in this sense.

CONTRACT-SPECIFIC DATA

Each item of data given below is cross-referenced to the clause in the Conditions of Contract to which it applies.

The following contract-specific data, referring to the General Conditions of Contract, are applicable to this Contract:

**GENERAL CONDITIONS
OF CONTRACT 2015**

NOTES

The purpose of this document is to:

- (i) draw special attention to certain general conditions applicable to bids, contracts and orders; and
- (ii) ensure that clients are familiar with the rights and obligations of all parties involved in doing business with the State / Municipality / Municipal Entity.

In this document words in the singular also mean in the plural and vice versa, and words in the masculine also mean in the feminine and neuter.

The General Conditions of Contract will form part of all bid documents and may not be amended.

Special Conditions of Contract (SCC) relevant to a specific bid should be compiled separately for every bid, if applicable, and will supplement these General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.

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1. DEFINITIONS

The following terms shall be interpreted as indicated:

- 1.1 "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
 - 1.2 "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
 - 1.3 "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
 - 1.4 "Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
 - 1.5 "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
 - 1.6 "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
 - 1.7 "Day" means calendar day.
 - 1.8 "Delivery" means delivery in compliance with the conditions of the contract or order.
 - 1.9 "Delivery ex stock" means immediate delivery directly from stock actually on hand.
 - 1.10 "Delivery into consignee's store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
 - 1.11 "Dumping" occurs when a private enterprise abroad markets its goods on its own initiative in the RSA at lower prices than that of the country of origin, and which have the potential to harm local industries in the RSA.
 - 1.12 "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
 - 1.13 "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial, non-competitive levels, and to deprive the bidder of the benefits of free and open competition.
 - 1.14 "GCC" means the General Conditions of Contract.
 - 1.15 "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
 - 1.16 "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors), and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry, as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be manufactured.
 - 1.17 "Local content" means that portion of the bidding price which is not included in the imported content, provided that local manufacture does take place.
 - 1.18 "Manufacture" means the production of products in a factory using labour, materials, components and machinery, and includes other related value-adding activities.
 - 1.19 "Order" means an official written order issued for the supply of goods or works or the rendering of a service.
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- 1.20 "Project site", where applicable, means the place indicated in the bidding documents.
- 1.21 "Purchaser" means the organization purchasing the goods.
- 1.22 "Republic" means the Republic of South Africa.
- 1.23 "SCC" means the Special Conditions of Contract.
- 1.24 "Services" means those functional services ancillary to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25 "Supplier" means the successful bidder who is awarded the contract to maintain and administer the required and specified service(s) to the State.
- 1.26 "Tort" means a breach of a duty imposed by law, other than a breach of contract.
- 1.27 "Turnkey" means a procurement process where one service provider assumes total responsibility for all aspects of the project and delivers the full end product / service required by the contract.
- 1.28 "Written" or "in writing" means handwritten in ink, or any form of electronic or mechanical writing.

2. APPLICATION

- 2.1 These general conditions are applicable to all bids, contracts and orders, including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
- 2.2 Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
- 2.3 Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.

3. GENERAL

- 3.1 Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable, a non-refundable fee for documents may be charged.
- 3.2 Invitations to bid are usually published in locally distributed news media and on the municipality's / municipal entity's website.

4. STANDARDS

- 4.1 The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.

5. USE OF CONTRACT DOCUMENTS AND INFORMATION; INSPECTION

- 5.1 The supplier shall not, without the purchaser's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.
 - 5.2 The supplier shall not, without the purchaser's prior written consent, make use of any document or information mentioned in GCC clause 5.1, except for purposes of performing the contract.
 - 5.3 Any document, other than the contract itself, mentioned in GCC clause 5.1 shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of the supplier's performance under the contract, if so required by the purchaser.
 - 5.4 The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier, and to have them audited by auditors appointed by the purchaser, if so required by the purchaser.
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6. PATENT RIGHTS

- 6.1 The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.
- 6.2 Where a supplier develops documentation / projects for the municipality / municipal entity, the intellectual property, copyright and patent rights, or ownership, of such documents or projects shall vest in the municipality / municipal entity.

7. PERFORMANCE SECURITY

- 7.1 Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security in the amount specified in the SCC.
- 7.2 The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3 The performance security shall be denominated in the currency of the contract, or in a freely convertible currency acceptable to the purchaser, and shall be in one of the following forms:
 - (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
 - (b) a cashier's or certified cheque.
- 7.4 The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations under the contract, including any warranty obligations, unless otherwise specified.

8. INSPECTIONS, TESTS AND ANALYSES

- 8.1 All pre-bidding testing shall be for the account of the bidder.
 - 8.2 If it is a bid condition that supplies to be produced, or services to be rendered, should at any stage during production or execution, or on completion, be subject to inspection, tests and analyses, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the purchaser or an organization acting on behalf of the purchaser.
 - 8.3 If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
 - 8.4 If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the goods to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
 - 8.5 Where the goods or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such goods or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
 - 8.6 Supplies and services referred to in clauses 8.2 and 8.3 which do not comply with the contract requirements may be rejected.
 - 8.7 Any contract goods may, on or after delivery, be inspected, tested or analyzed, and may be rejected if found not to comply with the requirements of the contract. Such rejected goods shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with goods which do comply with the requirements of the contract. Failing such removal, the rejected goods shall be returned at the supplier's cost and risk. Should the supplier fail to provide the substitute goods forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected goods, purchase such goods as may be necessary at the expense of the supplier.
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- 8.8 The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of clause 22 of the GCC.

9. PACKING

- 9.1 The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit, exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 9.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, and any subsequent instructions issued by the purchaser.

10. DELIVERY

- 10.1 Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier shall be as specified in the contract.

11. INSURANCE

- 11.1 The goods supplied under the contract shall be fully insured, in a freely convertible currency, against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery, in the manner specified.

12. TRANSPORTATION

- 12.1 Should a price other than an all-inclusive delivered price be required, this shall be specified.

13. INCIDENTAL SERVICES

- 13.1 The supplier may be required to provide any or all of the following services, including additional services, if any:
- (a) performance or supervision of on-site assembly and/or commissioning of the supplied goods;
 - (b) furnishing of tools required for assembly and/or maintenance of the supplied goods;
 - (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods;
 - (d) performance or supervision of maintenance and/or repair of the supplied goods for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
 - (e) training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied goods.
- 13.2 Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. SPARE PARTS

- 14.1 As specified, the supplier may be required to provide any or all of the following materials, notifications and information pertaining to spare parts manufactured or distributed by the supplier:
- (a) such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and
 - (b) in the event of termination of production of the spare parts:
 - (i) advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
-

- (ii) following such termination, furnishing at no cost to the purchaser the blueprints, drawings and specifications of the spare parts, if requested.

15. WARRANTY

- 15.1 The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the purchaser's specifications), or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2 This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in the SCC.
- 15.3 The purchaser shall promptly notify the supplier, in writing, of any claims arising under this warranty.
- 15.4 Upon receipt of such notice, the supplier shall, within the period specified and with all reasonable speed, repair or replace the defective goods or parts thereof, without cost to the purchaser.
- 15.5 If the supplier, having been notified, fails to remedy the defect(s) within the period specified, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense, and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. PAYMENT

- 16.1 The method and conditions of payment to be made to the supplier under this contract shall be as specified.
- 16.2 The supplier shall furnish the purchaser with an invoice, accompanied by a copy of the delivery note, and upon fulfilment of other obligations stipulated in the contract.
- 16.3 Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4 Payment will be made in Rand, unless otherwise stipulated.

17. PRICES

- 17.1 Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized, or in the purchaser's request for bid validity extension, as the case may be.

18. VARIATION ORDERS

- 18.1 In cases where the estimated value of the envisaged changes in purchase does not vary by more than 15% of the total value of the original contract, the contractor may be instructed to deliver the goods or render the services as varied. In cases of measurable quantities, the contractor may be approached to reduce the unit price, and such offers may be accepted, provided that there is no escalation in price.

19. ASSIGNMENT

The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. SUBCONTRACTS

The supplier shall notify the purchaser in writing of all subcontracts awarded under this contract, if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. DELAYS IN THE SUPPLIER'S PERFORMANCE

- 21.1 Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2 If, at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may, at its discretion, extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of the contract.
- 21.3 The purchaser reserves the right to procure outside of the contract small quantities, or to have minor essential services executed, if an emergency arises, if the supplier's point of supply is not situated at or near the place where the supplies are required, or if the supplier's services are not readily available.
- 21.4 Except as provided under GCC clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC clause 22, unless an extension of time is agreed upon pursuant to GCC clause 21.2 without the application of penalties.
- 21.5 Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract, and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract, and, without prejudice to its other rights, be entitled to claim damages from the supplier.

22. PENALTIES

Subject to GCC clause 25, if the supplier fails to deliver any or all of the goods, or to perform the services, within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services, using the current prime interest rate, calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC clause 23.

23. TERMINATION FOR DEFAULT

- 23.1 The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
 - (a) if the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC clause 21.2;
 - (b) if the supplier fails to perform any other obligation(s) under the contract; or
 - (c) if the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practice in competing for, or in executing, the contract.
 - 23.2 In the event that the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue performance of the contract to the extent not terminated.
 - 23.3 Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding ten (10) years.
-

- 23.4 If the purchaser intends imposing a restriction on a supplier, or any person associated with the supplier, the supplier shall be allowed a period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days, the purchaser may regard the supplier as having no objection and proceed with the restriction.
- 23.5 Any restriction imposed on any person by the purchaser will, at the discretion of the purchaser, also be applicable to any other enterprise, or any partner, manager, director or other person who wholly or partly exercises, or exercised, or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person is, or was, in the opinion of the purchaser, actively associated.
- 23.6 If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury with the following information:
- (a) the name and address of the supplier and/or person restricted by the purchaser;
 - (b) the date of commencement of the restriction;
 - (c) the period of restriction; and
 - (d) the reasons for the restriction.

These details will be loaded onto the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.

- 23.7 If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. Once a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period of not less than five (5) years and not more than ten (10) years. The National Treasury is empowered to determine the period of restriction, and each case will be dealt with on its own merits. In terms of section 32 of the Act, the Register must be open to the public, and can be viewed on the National Treasury website.

24. ANTI-DUMPING AND COUNTERVAILING DUTIES AND RIGHTS

When, after the date of bid, provisional payments are required, or anti-dumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State shall not be liable for any amount so required or imposed, or for the amount of any such increase. Where, after the said date, such a provisional payment is no longer required, or any such anti-dumping or countervailing right is abolished, or the amount of such provisional payment or right is reduced, any such favourable difference shall, on demand, be paid forthwith by the contractor to the State, or the State may deduct such amounts from any moneys which may otherwise be due to the contractor in respect of supplies or services delivered or rendered, or to be delivered or rendered, in terms of the contract or any other contract, or any other amount due to the contractor.

25. FORCE MAJEURE

- 25.1 Notwithstanding the provisions of GCC clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default, if and to the extent that its delay in performance, or other failure to perform its obligations under the contract, is the result of an event of force majeure.
- 25.2 If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means of performance not prevented by the force majeure event.

26. TERMINATION FOR INSOLVENCY

The purchaser may, at any time, terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the

supplier, provided that such termination shall not prejudice or affect any right of action or remedy which has accrued, or will accrue thereafter, to the purchaser.

27. SETTLEMENT OF DISPUTES

- 27.1 If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with, or arising out of, the contract, the parties shall make every effort to resolve such dispute or difference amicably by mutual consultation.
- 27.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, either the purchaser or the supplier may give notice to the other party of its intention to commence mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.
- 27.3 Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.
- 27.4 Notwithstanding any reference to mediation and/or court proceedings herein:
- (a) the parties shall continue to perform their respective obligations under the contract, unless they otherwise agree; and
 - (b) the purchaser shall pay the supplier any monies due for goods delivered and/or services rendered in accordance with the terms of the contract.

28. LIMITATION OF LIABILITY

- 28.1 Except in cases of criminal negligence or wilful misconduct, and in the case of infringement pursuant to clause 6:
- (a) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and
 - (b) the aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

29. GOVERNING LANGUAGE

The contract shall be written in English. All correspondence and other documents pertaining to the contract exchanged between the parties shall also be written in English.

30. APPLICABLE LAW

The contract shall be interpreted in accordance with the laws of South Africa, unless otherwise specified.

31. NOTICES

- 31.1 Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail, and any other notice to the supplier shall be posted by ordinary mail to the address furnished in its bid, or to the address notified later by it in writing; such posting shall be deemed to be proper service of such notice.
- 31.2 The time mentioned in the contract documents for performing any act after the aforesaid notice has been given shall be reckoned from the date of posting of such notice.

32. TAXES AND DUTIES

- 32.1 A foreign supplier shall be entirely responsible for all taxes, stamp duties, licence fees and other such levies imposed outside the purchaser's country.
- 32.2 A local supplier shall be entirely responsible for all taxes, duties, licence fees, etc., incurred until delivery of the contracted goods to the purchaser.
-

32.3 No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid, the South African Revenue Service (SARS) must have certified that the tax matters of the preferred bidder are in order.

32.4 No contract shall be concluded with any bidder whose municipal rates and taxes and municipal service charges are in arrears.

33. TRANSFER OF CONTRACTS

The contractor shall not abandon, transfer, cede, assign or sublet a contract, or any part thereof, without the written permission of the purchaser.

34. AMENDMENT OF CONTRACTS

No agreement to amend or vary a contract or order, or the conditions, stipulations or provisions thereof, shall be valid and of any force unless such agreement to amend or vary is entered into in writing and signed by the contracting parties. Any waiver of the requirement that the agreement to amend or vary be in writing shall likewise be in writing.

35. PROHIBITION OF RESTRICTIVE PRACTICES

35.1 In terms of section 4(1)(b)(iii) of the Competition Act, No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder(s) is / are, or a contractor(s) was / were, involved in collusive bidding.

35.2 If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and the possible imposition of administrative penalties, as contemplated in section 59 of the Competition Act, No. 89 of 1998.

35.3 If a bidder(s) or contractor(s) has / have been found guilty by the Competition Commission of the restrictive practice referred to above, the purchaser may, in addition to and without prejudice to any other remedy provided for, invalidate the bid(s) for such item(s) offered, and/or terminate the contract in whole or in part, and/or restrict the bidder(s) or contractor(s) from conducting business with the public sector for a period not exceeding ten (10) years, and/or claim damages from the bidder(s) or contractor(s) concerned.

Compulsory Data:

Clause	Data
1.1.1.13	The Defects Liability Period is 365 days
1.1.1.14	Time for Practical Completion is 18 months
1.1.1.15	The name of the Employer is uMkhanyakude District Municipality
1.1.1.26	The Pricing Strategy of a Re-measurement Contract shall apply
1.2.1.2	The address of the Employer is: Physical address: Stand 13433 Kingfisher Road MKUZE 3965 Postal address: Private Bag 449 MKUZE 3965 e-mail address: zamathet@gmail.com Contact numbers: Tel. : (035) 573 8600 Fax : (035) 573 8730
1.1.1.16	The name of the Employer's Agent is: SDM Consulting Engineers and Project Managers (Pty) Ltd
1.2.1.2	The address of the Employer's Agent is: Physical address: Strathmore Park 305 Musgrave Road Essenview Building Suite 207A, 2nd Floor Contact Person: Mr Noel Nyawade e-mail address: nyawade@sdmconsulting.co.za Contact numbers: Cell: 079 495 9986

Clause	Data
1.3.2	The governing law applicable is the law of South Africa
1.3.3	The language of the contract and for written communication is English (South Africa)
3.2.3	The Employer's Agent shall obtain the specific approval of the Employer before carrying out any of his functions or duties according to the following Clauses of the General Conditions of Contract.
4.10.1	The contractor shall employ a Community Liaison Officer (CLO), who will be identified by the Employer and on terms specified in this document. The contractor shall recruit local labour only through the services of the CLO in consultation with the Project Steering Committee. Contractor's default in Payment to Labourers and Employees: Any dispute between the Contractor and labourers, regarding delayed payment or default in payment of fair wages, if not resolved immediately may compel the Employer to intervene. The Employer may, upon the Contractor defaulting payment, pay the moneys due to the workers not honoured in time, out of any moneys due or which may become due to the Contractor under the Contract.
5.3.1	The documentation required before commencement with Works execution are: • Health and Safety Plan (Refer to Clause 4.3) • A signed Agreement between the Employer and the Contractor for the Works to be completed by the Contractor in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act No.85 of 1993) and the Construction Regulations promulgated thereunder (Refer to Clause 4.3). • Initial programme (Refer to Clause 5.6) • Performance Security (Refer to Clause 6.2) • Insurance (Refer to Clause 8.6)
5.3.2	The time to submit the documentation required before commencement with Works execution is 14 days
5.4.2	The access and possession of Site shall not be exclusive to the Contractor but shall be as set out elsewhere in the Contract.

Clause	Data
5.8.1	The non-working days are Sundays The special non-working Days are: - Any statutory public holiday in terms of the Public Holidays Act, and, where such statutory public holiday falls on a Sunday, and the next Monday subsequently becomes a statutory public holiday in terms of the Public Holidays Act, then both the relevant Sunday and the relevant Monday shall be special non-working days under the contract; - any proclaimed statutory day of mourning which is proclaimed as a statutory public holiday; - any proclaimed statutory election day which is proclaimed as a statutory public holiday; and - all annual year-end shutdown periods as recommended by the South African Bargaining Council for the Civil Engineering Industry.
5.12.2.2	Extension of Time for Abnormal Rainfall Extensions of time to be considered for abnormal rainfall in terms of Clause 5.12.2.2 shall be calculated as per section C4.2. For the purpose of applying the formula, accurate rain gauging shall be taken at suitable points on the Site and the Contractor shall at his own expense, take all necessary precautions to ensure that rain gauges cannot be interfered with by unauthorized persons.
5.13.1	The penalty for failing to complete the works is 0,05% of contract price per day. The limit of penalties is 10% of the Contract Price
5.16.3	The latent defect period is 10 years, commencing on the day after the date of certification of Practical Completion
6.2.1	The security to be provided by the Contractor shall be a total not exceeding 10% of the Contract Sum in a form to be selected by the Contractor from the applicable options in C1.2.2.
6.5.1.2.3	The percentage allowance to cover overhead charges is: 50% on the cost of labour (6.5.1.2.1) and 15% on the cost of materials (6.5.1.2.2).

Clause	Data
6.8.2	The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: The value of the Contract Price Adjustment Factor shall be calculated to 4 decimal places. The value of "x" is 0,10. The values of the coefficients are: a = 0,25 for labour (L) b = 0,25 for equipment and plant (P) c = 0,40 for material (M) d = 0,10 for fuel (F) The Site or largest part thereof shall be deemed to be located within Jozini Local Municipality in the national province of KwaZulu-Natal.

Clause	Data
	<i>The descriptions of the "L", "P", "M" and "F" indices in the Contract Price Adjustment Schedule shall be replaced with the following, which shall apply to this contract:</i> "L" is the "Labour Index" and shall be the Consumer Price Index for the urban area nearest to the Site, as stated in the Contract Data, and as published in the Statistical News Release, P0141, Additional Tables: Table 14 "CPI – all items according to area" of Statistics South Africa, or as otherwise amended after the Commencement Date by Statistics South Africa to another suitable equivalent index to be applied to the contract and which takes effect on a specific date, subject to written agreement between the Contractor and Employer. P" is the "Construction Equipment Index" and shall be the Producer Price Index applicable to the appropriate Construction Equipment as stated in the Contract Data and as published in the Statistical Release P0151, Table 4 of Statistics South Africa, or as otherwise amended after the Commencement Date by Statistics South Africa to another suitable equivalent index to be applied to the contract and which takes effect on a specific date, subject to written agreement between the Contractor and Employer. The Construction Equipment shall be Civil engineering plant as listed in Statistical Release P0151, Table 4 "Producer Price Index" of Statistics South Africa. "M" is the "Materials Index" and shall be the Producer Price Index applicable to the appropriate materials as stated in the Contract Data and as published in the Statistical Release P0151, Table 3 or Table 4 of Statistics South Africa, or as otherwise amended after the Commencement Date by Statistics South Africa to another suitable equivalent index to be applied to the contract and which takes effect on a specific date, subject to written agreement between the Contractor and Employer. The Materials shall be Building and Construction - Civil Engineering as listed in the Statistical Release P0151, Table 3 or Table 4 respectively, of Statistics South Africa (which shall apply to the "Materials Index" as a relevant Producer Price Index). "F" is the "Fuel Index" and shall be the Producer Price Index for Diesel at wholesale level for the area as stated in the Contract Data and as published in the Statistical News Release P0151, Table 4 of Statistics South Africa, or as otherwise amended after the Commencement Date by Statistics South Africa to another suitable equivalent index to be applied to the contract and which takes effect on a specific date, subject to written agreement between the Contractor and Employer.' Where applicable, the area for Diesel at wholesale level shall be 'Coast' as listed in the Statistical Release P0151, Table 4 of Statistics South Africa (which shall apply to the "Fuel Index" as a relevant Producer Price Index). The applicable industry for the Producer Price Index for materials is Building and Construction Civil Engineering. The area for the Producer Price Index for fuel is Coast. The base month is "one month prior to the Closing Time of the Tender". The base month is JULY 2026 prior to the closing of the tender.
6.8.3	Price adjustments for variations in the costs of special materials are not provided for.

Clause	Data
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%. Proof of ownership is required.
6.10.3	There is no limit of retention money.
8.6.1.1.2	The value of Plant and materials supplied by the Employer to be included in the insurance sum is: 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 a maximum of 4 % of the Contract Sum.
8.6.1.3	The limit of indemnity for liability insurance is R 10 000 000,00 for any single claim. The number of claims during the construction and Defects Liability Periods shall be unlimited.
8.6.8	Manufacturing and/or fabrication and storage at premises other than the Site <i>Add the following new Sub-Clause 8.6.8:</i> "Where the contract involves manufacturing and/or fabrication of the Works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's policies of insurance."
10.5.2	Dispute resolution shall be by ad-hoc adjudication
10.5.3	The number of Adjudication Board Members to be appointed is one.
10.7.1	The determination of disputes shall be by arbitration.

Variations to the General Conditions of Contract applicable to this contract are:

Clause	Data
	None

Additional clauses to the General Conditions of Contract applicable to this contract are:

Clause	Data
1.1	Definition <i>Add the following at the end of Sub-Clause 1.1.1:</i>
1.1.1.35	"Client", as used in the Occupational Health and Safety Act - Construction Regulations, means Employer.
1.1.1.36	"Principal Contractor", as used in the Occupational Health and Safety Act - Construction Regulations, means Contractor.

PART 2: DATA PROVIDED BY THE SERVICE PROVIDER

The Contractor is advised to read the *General Conditions of Contract*, as specified in Part 1, in order to understand the implications of this Data which is required to be completed.

Each item of data given below is cross-referenced to the clause in the Conditions of Contract to which it mainly applies

Clause	Data								
1.1.1.9	The Name of the Contractor is _____ <i>[Enter the legal name of the Contractor]</i>								
1.2.1.2	The address of the Contractor is: Physical address: _____ _____ _____ _____ Postal address: _____ _____ _____ _____ e-mail address: _____ Contact numbers: Corporate: _____ Direct: _____ Mobile: _____ Fax: _____								
6.2.1	The security to be provided by the Contractor shall be one of the following: <table border="1"> <thead> <tr> <th>Type of security (with Value Added Tax excluded from the Contract Sum and from the value of the Works for calculating the percentages)</th><th>Indicate "Yes" or "No"</th></tr> </thead> <tbody> <tr> <td>Retention of 10% of the value of the Works (5% held for defects liability period).</td><td></td></tr> <tr> <td>Fixed Performance guarantee of 10% of the Contract Sum</td><td></td></tr> <tr> <td>Variable Performance guarantee % of the Contract Sum</td><td></td></tr> </tbody> </table>	Type of security (with Value Added Tax excluded from the Contract Sum and from the value of the Works for calculating the percentages)	Indicate "Yes" or "No"	Retention of 10% of the value of the Works (5% held for defects liability period).		Fixed Performance guarantee of 10% of the Contract Sum		Variable Performance guarantee % of the Contract Sum	
Type of security (with Value Added Tax excluded from the Contract Sum and from the value of the Works for calculating the percentages)	Indicate "Yes" or "No"								
Retention of 10% of the value of the Works (5% held for defects liability period).									
Fixed Performance guarantee of 10% of the Contract Sum									
Variable Performance guarantee % of the Contract Sum									

Signature.....

Date.....

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

PART 3: CORRIGENDA TO GCC 2015 BY SAICE

Corrections 2017-06-09 published by SAICE and all further updates, errata or other amendments to GCC 2015 published by SAICE prior to the Base Month of this Contract shall be deemed to form part of GCC 2015.

Each party to the Contract shall purchase its own copy of such updates, errata, corrections and other amendments to GCC 2015

PART 4: CORRIGENDA TO GCC 2015 EMPLOYER

The items in this Part 4 (if any) shall be deemed to be supplementary corrigenda by the Employer to the GCC 2015, and shall be deemed to form part of GCC 2015. In the event of conflict between any item in this Part 4 and an item in the above Part 3, the relevant item in Part 3 shall take precedence

C1.3 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: uMkhanyakude District Municipality

"Company" means:

"Contractor" means:

"Employer's Agent" means: SDM Consulting Engineers and Project Managers (Pty) Ltd

"Works" means: **Contract SCMU 001/2026/2027: COMPLETION OF NONDABUYA WATER SUPPLY SCHEME – WARDS 6, 8, 9, 14 & 19**

"Site" means: Construction area at Jozini Local Municipality.

"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 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 deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 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 Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of 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 IN TERMS OF SECTION 37(2) OF THE
OCCUPATIONAL HEALTH AND SAFETY ACT NO 85 OF 1993****AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT N° 85
OF 1993**

THIS AGREEMENT is made between **uMkhanyakude District 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 authorized to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatory of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of

Contract Tender Contract SCMU 001/2026/2027: COMPLETION OF NONDABUYA WATER SUPPLY SCHEME – WARDS 6, 8, 9, 14 & 19;

AND WHEREAS the EMPLOYER and the CONTRACTOR have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by OHS Act Amendment Act No 181/1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. The CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
 2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
 3. The CONTRACTOR hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONTRACTOR expressly absolves the EMPLOYER and the EMPLOYER'S AGENT from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.
 4. The CONTRACTOR agrees that any duly authorized officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR has
-

complied with his undertakings as more fully set out in paragraphs 1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONTRACTOR, or to take such steps it may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.

5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at for and on behalf of the **CONTRACTOR**

on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Thus signed at for and on behalf of the **EMPLOYER**

on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

C1.5 TRANSFER OF RIGHTS AND INDEMNITY

(To be completed during construction by successful Tenderer only when claiming for materials on site)

Claim for materials on site, Payment Certificate N°. Date:

Contract N°: Contract SCMU 001/2026/2027: COMPLETION OF NONDABUYA WATER SUPPLY SCHEME – WARDS 6, 8, 9, 14 & 19

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

.....
duly authorised 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 2015.

C1.6 ADJUDICATOR'S CERTIFICATES**C1.6.1: DISCLOSURE STATEMENT**

Please note that words in italics within brackets are items which should be stated.

(Date)

Contract:

Contractor:

Employer: uMkhanyakude District Municipality

Employer's Agent :

Dear Sirs/Mesdames

I am willing and available to serve as *ad-hoc* Adjudication Board Member in the above mentioned Contract.

In accordance with the General Conditions of Contract for Construction Works Adjudication Board Rules relating to disclosure statements by selected or nominated persons to the adjudication, I hereby state that:

- I shall act with complete impartiality and know of nothing at this time, which could affect my impartiality.
- I have had no previous involvement with this project.
- I do not have any financial interest in this project.
- I am not currently employed by the Contractor, Employer or Employer's Agent.
- I do not have any financial connections with the Contractor, Employer or Employer's Agent.
- I do not have or have not had a personal relationship with any authoritative member of the Contractor, Employer or the Employer's Agent which could affect my impartiality.
- I undertake to immediately disclose to the parties any changes in the above position which could affect my impartiality or be perceived to affect same.

Should there be any deviation from the foregoing statements, details shall be given.

I further declare that I am experienced in the work which is carried out under the Contract and in interpreting contract documentation.

Name in full:

Signature:

C1.6.2: ADJUDICATION BOARD MEMBER STATEMENT

This Agreement is entered into between:

Adjudication Board Member:

Name:

Physical address:

.....

.....

Postal address:

.....

.....

e-mail address: Fax number:

Telephone number: Mobile number:

Contractor:

Name:

Physical address:

.....

.....

Postal address:

.....

.....

e-mail address: Fax number:

Telephone number: Mobile number:

Employer:

Name: uMkhanyakude District Municipality

Physical address: Stand 13433, Kingfisher Road, MKUZE, 3965

Postal address: Private Bag 449, MKUZE, 3965

Telephone number: (035) 573 8600

Fax number: (035) 573 8730

The Contractor and the Employer will hereinafter be collectively referred to as the Parties.

The Parties entered into a Contract for Contract

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which provides that a dispute under or in connection with the General Conditions of Contract for Construction Works, Third Edition, 2015, must be referred to ad-hoc adjudication.

The undersigned natural person has been appointed to serve as Adjudication Board Member and together with the undersigned Parties agree as follows:

- 1, The Adjudication Board Member accepts to perform his duties in accordance with the terms of Contract, the General Conditions of Contract for Construction Works Adjudication Board Rules and this Agreement.
2. The Adjudicator undertakes to remain independent and impartial of the Contractor, Employer and Employer's Agent for the duration of the Adjudication Board proceedings.
3. The Adjudication Board Member agrees to serve for the duration of the Adjudication Board proceedings.
4. The Parties may at any time, without cause and with immediate effect, jointly terminate this Agreement.
5. Unless the Parties agree, the Adjudication Board Member shall not act as arbitrator or representative of either Party in any subsequent proceedings between the Parties under the Contract. No Party may call the Adjudication Board Member as a witness in any such subsequent proceedings.
6. The standing Adjudication Board's duties shall end upon the Adjudication Board Member(s) receiving notice from the Parties of their joint decision to disband the Adjudication Board.
7. The Adjudication Board Member shall be paid in respect of time spent upon or in connection with the adjudication including time spent travelling:
 - (a) A monthly retainer of (amount) for (number) of months, and/or
 - (b) A daily fee of (amount) based on a (number) hour day, and or
 - (c) An hourly fee of (amount), and/or
 - (d) A non-recurrent appointment fee of (amount) which shall be accounted for in the final sums payable.
8. The Adjudication Board Member's expenses incurred in adjudication work shall be reimbursed at cost.

Upon submission of an invoice for fees and expenses to the Parties, the (Contractor/Employer*) shall pay the full amount within 28 days of receipt of the invoice and he shall be reimbursed by the other party by half the amount so that the fees and expenses are borne equally by the Parties. Late payment

of such invoices shall attract interest at prime plus 3% points compounded monthly at the prime rate charged by the Adjudication Board Member's bank.

This Agreement is entered into by:

Contractor's signature:

Contractor's name:

Place:

Date:

Employer's signature

Employer's name: uMkhanyakude District Municipality

Place:

Date:

Adjudication Board Member's signature:

Adjudication Board Member's name:

Place:

Date:

**Delete the inapplicable part*

C2: PRICING DATA

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C2.1 PRICING INSTRUCTIONS

1.0 GENERAL

The Contractor's attention is drawn to the Conditions of Contract, to the Specification and the Tender Drawings, all of which are to be read in conjunction with the Bill of Quantities.

2.0 STANDARD SYSTEM

The Bill of Quantities shall be interpreted in accordance with the method of measurement set out in the Specifications except where variations are implied by the omission of items or by the actual wording of the items in the Bill of Quantities.

The quantities in the Bill of Quantities are provisional. The Works as executed will be measured for payment in accordance with the Bill of Quantities and under the items set forth therein, notwithstanding any custom to the contrary.

In the event of any item to be measured not being reasonably covered by the above Bill, then the Standard Method of Measurement described in Clause 6.7 of the General Conditions of Contract (2015) shall apply and the appropriate rate shall be negotiated between the Engineer and the Contractor.

31.0 MEASUREMENT

Measurement shall be made of the finished work from the net dimensions or masses indicated in the drawings, and no allowance has been made, or will be made for waste.

4.0 PRICES INCLUSIVE

Prices and rates to be inserted in the Bill of Quantities are to be the full inclusive value of the Work described under the several items, but excluding Value Added Tax, which is not to be included in the rates but is to be included in the appropriate item in the Summary Sheet of the Schedule of Quantities.

The items shall, unless otherwise stated herein, be held to include making, conveying and delivering, unloading, storing, unpacking, hoisting, setting, fitting and fixing in position, cutting and waste, laps, patterns, models and templates, labour, plant, fuel, hiring costs, temporary works, return of packings, safety precautions, overheads, on-costs, establishment charges, profit and all other costs and expenses which may be required in and for the construction of the work described together with all risks, liabilities and obligations arising out of the Conditions of Contract or implied in the Documents on which the Tender is to be based. Where special risks, liabilities and obligations cannot be dealt with as above, then the price thereof is to be separately stated in the item provided for the purpose.

5.0 SPECIFICATIONS AND DESCRIPTIONS

Descriptions in the Bill of Quantities are abbreviated and all Specification Clauses shall be read and deemed to apply to the items described in this Bill of Quantities which are to be priced accordingly.

In the event of any Clause in the preceding Specifications being in conflict with any description and/or amplification thereof in the Bill of Quantities the former shall prevail, and the Project Specification shall take precedence over the General Specification.

Directions and description of work and material given in the Specification are not necessarily repeated in the Bill of Quantities. Reference is to be made to the Conditions of Contract, Specification and other relevant documents for this information. While references may be given in the Bill, such references are not necessarily complete.

6.0 COMPLETION OF BILL OF QUANTITIES

The Bill of Quantities shall be completed in full in black ink.

A price or rate shall be entered against each item where provision is made for such pricing in the Bill of Quantities, whether quantities are stated or not.

No two or more items can be bracketed together for a single price or rate as this will invalidate the tender. Items against which **N/A, left blank or –** is entered are to be considered as incomplete and will invalidate the tender.

Items against which **NIL or zero (0)** is entered are to be considered to be fully priced and the tenderer will provide the items in question as specified at zero (0) or NIL price.

7.0 METHOD STATEMENT

Quantities have generally been measured in accordance with SABS 1200 Standard Specifications where applicable and where not applicable then generally in accordance with the Sixth Edition (including amendments) of the Standard System of Measuring Builder's Work as issued by the Association of South African Quantity Surveyors unless otherwise stated herein.

7.1 Terms Used

In this Bill of Quantities the following expressions shall have the meanings hereinafter assigned to them unless otherwise described in the items concerned:-

- (i) "ALLOW" Where the word "allow" is used in any item of the Bill of Quantities the sum entered by the Contractor is at his risk and shall cover all costs and charges in respect of the work referred to during the period of the Contract.
 - (ii) "PROVIDE" Where the word "provide" is used and a sum has been inserted by the Engineer to cover the cost of any particular item of work, the sum so entered shall be dealt with in accordance with the provisions of the General Conditions of Contract.
 - (iii) "BUDGETARY ALLOWANCE" Where the word "budgetary allowance" is used, the sum inserted by the Engineer to cover the cost of the particular item of work will be omitted during the Contract and the work will be measured in accordance with the procedure set out in the Bill of Quantities and valued at the rates contained in the priced Bill of Quantities for similar work.
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8.0 APPROVED, DIRECTED OR SELECTED

The words “approved”, “directed” or “selected” refer to the approval, direction or selection of the Engineer.

9.0 TRADE NAMES, PROPRIETARY BRANDS, ETC

All materials, fittings, furnishings, etc., specified under a Trade Name, Proprietary Brand or Catalogue Reference, shall be:

9.1 Used in strict accordance with the Manufacturer’s latest printed instructions.

9.2 Either exactly as described or of equal quality, weight or specification and approved by the Engineer.

The Contractor shall first obtain written approval from the Engineer before goods are placed on order from a source of supply other than is specified herein. Such approval shall not be unreasonably withheld.

10.0 MATERIALS AND WORKMANSHIP

All materials shall be the best of their respective kinds specified and the workmanship shall be the standard defined for the trade tests required for such work and to the approval of the Engineer.

In all cases the materials and workmanship shall be in accordance with the latest edition of the relevant South African Bureau of Standards (SABS) or if not defined therein the British Standard Specification (BSS) or Code of Practice (BSCP) unless otherwise specified.

The quantities given in this Bill should not be used for ordering materials.

The units of measurement described in the Bill of Quantities are metric units for which the standard international abbreviations are used. Abbreviations used in the Bill of Quantities, including some non-standard abbreviations, are as follows:

mm = millimeter	h = hour	pe = plain ended
m = meter	kg = kilogram	FL = flanged
km = kilometer	t = ton (1000 kg)	D/FL = double flanged
m ² = square meter	No. = number	C/F = centre to face
sum = lump sum	P C sum = Prime Cost sum	DN = Nominal diameter
ha = hectare	Prov sum = Provisional sum	ID = Inside diameter
m ³ = cubic meter	% = per cent	OD = Outside diameter
m ³ .km = cubic meter-kilometer	kℓ = kilolitre	kW = kilowatt
ℓ = litre	MPa = megapascal	

C2.2 PRICING SCHEDULE – BILL OF QUANTITIES

SECTION 1: PRELIMINARY AND GENERAL						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	SANS 1200 A	PRELIMINARY AND GENERAL				
1.1	8.3	<u>Scheduled Fixed-Charge and Value-Related Items</u>				
1.1.1	8.3.1	Contractual Requirements	Sum	1		
		<u>Provision for the site facilities:</u>				
1.1.2	8.3.2.1	<u>a) Facilities for the Engineer</u>				
1.1.3		Survey equipment	Sum	1		
1.1.4		Resident Engineer : Provision of data for site purposes	Sum	1		
1.1.5		As-built data collection by profesional surveyor	Sum	1		
1.1.6		2 x Name Boards (as per drawing)	Sum	4		
1.1.7	8.3.2.2	<u>b) Facilities for the Contractor</u>				
1.1.8		Supply and erection of 2 x Parkhome offices (6mx3m open plan Bolt Modular Parkhome or similar, as approved by the Engineer), storage sheds, workshops, ablution and latrine facilities, tools and equipment, water supplies, electric power, communications, access and fencing (The office to have at least two work stations of a table and three chairs each)	Sum	2		
1.1.9		Dealing with water generally on site and at river crossings	Sum	1		
1.1.10	8.3.4	Removal of site establishment on completion of the project	Sum	2		
1.1.11		Accommodation of traffic and road crossings	Sum	1		
1.1.12		As built drawings and operating and maintenance manuals	Sum	1		
1.1.13		Provision of access to properties during construction	Sum	1		
1.1.14	PSA	Compliance with the OHS Act regulations (Rate to include for risk assessment specific to the COVID-19 Ependemic and other adjustments to ensure compliance for the assignment including maintenance of a register for workers contacts, Provision of PPE & other H&S matters)	Sum	1		
1.1.16		Preparation of a OHS Plan	Sum	1		
		<u>Costs of medical certificate and Medical Surveillance including Screenings for Employees with COVID-19Symptoms</u>				
1.1.17		Allowance for Health and Safety Officer (24 Months)	Sum	1		
Carried Forward						

C2.7

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought Forward						
1.2	8.4	SCHEDULED TIME-RELATED ITEMS				
1.2.1	8.4.1	Contractual requirements and operating and maintaining facilities on site				
	8.4.2	Facilities for the Engineer-				
1.2.2		a) Nameboards (2No) (Refer to Drawing)	No.	18		
1.2.3		b) Survey assistants and materials	No.	18		
1.2.5	8.4.3	Facilities for the Contractor-				
1.2.6		Offices, storage sheds, workshops, living accommodation, ablution and latrine facilities, tools and equipment, water supplies, electric power, communications, access and plant	No	18		
1.2.7		Dealing with water generally on site and at river crossings	No	18		
1.2.8		Accommodation of traffic and road crossings	No	18		
1.2.9		Provision of access to properties during construction	No	18		
1.2.10	8.4.6	Updating and amending the risk assessments, safe work procedures, the project H&S File, the H&S plan, the provision of PPE and protective clothing and any other H&S matters that the contractor deems necessary	No	18		
1.2.11		Allowance for Health and Safety Officer (24 Months)	No	18		
1.2.12	8.4.4	Supervision for duration of construction	No	18		
1.2.13	8.4.5	Company and head office overhead costs for the duration of the contract	No	18		
1.2.14		24-hour security/ watchmen/woman on site	No	18		
1.3		SUMS STATED PROVISIONALLY BY THE ENGINEER				
1.3.1	PSA3	Employment of CLO for the duration of the Contract (R14500 pm plus R500 pm cellphone allowance) over 20 months	Prov. Sum	1	R 300 000.00	R 300 000.00
1.3.2		Contractors markup on item 1.3.1	%	R 300 000.00		
1.3.3		Payment of PSC members for attendance of meetings for the duration of the contract (8 No members per Ward over the five (5) Wards at R750 per member per meeting) over 12 months (Contractor's programme to ensure that no work within a ward exceeds 12-months)	Prov. Sum	1	R 360 000.00	R 360 000.00
1.3.4		Contractors markup on item 1.3.3	%	R 360 000.00		
Carried Forward						

C2.8

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought Forward						
1.3.5		Empowerment of local personnel through skills development and skills transfer by an accredited trainer/service provider to be appointed or nominated by client.	Prov Sum	1	R 70 000.00	R 70 000.00
1.3.6		Contractors markup on item 1.3.5	%	R 70 000.00		
1.3.7		Provisional sum for conforming with the requirements of EPWP	Prov Sum	1	R 48 000.00	R 48 000.00
1.3.8		Contractors markup on item 1.3.7	%	R 48 000.00		
1.3.9		Additional tests ordered by the Engineer	Prov Sum	1	R 100 000.00	R 100 000.00
1.3.10		Contractors markup on item 1.3.9	%	R 100 000.00		
1.3.11		Allow provisional sum for Water Treatment Works Process Engineer Specialist appointed by the Engineer	Prov Sum	1	R 150 000.00	R 150 000.00
1.3.12		Contractors markup on item 1.3.11	%	R 150 000.00		
1.3.13		Allow provisional sum for Electromechanical Specialist appointed by the Engineer	Prov Sum	1	R 250 000.00	R 250 000.00
1.3.14		Contractors markup on item 1.3.13	%	R 250 000.00		
1.3.15		Allow provisional sum for environmental rehabilitation at specific locations by a selected sub contractor	Prov Sum	1	R 70 000.00	R 70 000.00
1.3.16		Contractors markup on item 1.3.15	%	R 70 000.00		
1.3.17		Provisional Sum for the provision of adequately armed security personnel together with 4x2 vehicle - Sourced and dedicated to the Engineer and paid for by the Contractor through the Engineer over 20 months	Prov Sum	1	R 451 100.00	R 451 100.00
1.3.18		Contractors markup on item 1.3.17	%	R 451 100.00		
1.3.19		Allowance for removal and disposal of existing works complete and make good as directed by engineer	Prov Sum	1	R 50 000.00	R 50 000.00
1.3.20		Contractors markup on item 1.3.19	%	R 50 000.00		
1.3.21		Allowance for water testing of pipelines complete and make good as directed by engineer (2 fillings)	Prov Sum	1	R 100 000.00	R 100 000.00
Carried Forward						

C2.9

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought Forward						
1.3.22		Contractors markup on item 1.3.21	%	R 100 000.00		
1.3.23		Allowance for compensating landowners for crop damage due to construction	Prov Sum	1	R 100 000.00	R 100 000.00
1.3.24		Contractors markup on item 1.3.23	%	R 100 000.00		
		<u>Temporary Works</u>				
1.3.33		Maintain all roads where construction activities will take place	Prov. Sum	1	R 200 000.00	R 200 000.00
1.3.34		Contractors markup on item 1.3.33	%	R 200 000.00		
1.4	8.7	<u>Dayworks</u>				
1.4.1		Foreman	hr	60		
1.4.2		Skilled	hr	60		
1.4.3		Semi-skilled	hr	100		
1.4.4		Unskilled	hr	100		
	8.7	<u>Plant</u>				
		T L B	hr	60		
		Light Delivery Vehicle (1t or equivalent)	hr	60		
		10Ton crane truck	hr	60		
		Generator set	hr	60		
		Plate compactor	hr	60		
Total Carried Forward To Summary						

C2.10

SECTION 2 : SITE CLEARANCE						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2	SANS 1200 C & PSC	SITE CLEARANCE				
2.1		<u>CLEAR SITE</u>				
2.1.1	8.2.1	Clear and grub vegetation in strip 2m wide on pipe route. Rate to include for trees of girth up to and including 1m.	m	160444		
2.1.2	8.2.2	<u>Where instructed remove and grub large trees and tree stumps of girth:</u>				
2.1.2.1	8.2.2(a)	over 1m and up to 2m.	Nº	60		
2.1.3		Excavation of trial holes 1,0 m x 1,0 m x 0,8 m deep as ordered	Nº	40		
2.1.4		Remove and reinstate fences parallel to pipeline (fences comprising up to 3 strands wire/barbed wire or disjointed timber slats to be included in the normal rate for excavation)	m	2000		
2.1.5	PSC 8.2.13	<u>Remove existing gravel layer works to stockpile and maintain (for use as selected layers) as instructed by the Engineer.</u>				
2.1.5.1		Gravel layer works to District Roads.	m³	560		
2.1.5.2		Fill material	m³	0		
2.1.5.3		Relocation of existing fences	m	4000		
2.1.5.4		Working adjacent to existing services (stormwater pipes, stormwater v-drains, water pipes and electrical and telecommunication services)	m	300		
2.1.5.5		Working parallel to existing services (stormwater pipes, stormwater v-drains, water pipes and electrical and telecommunication services)	Nº	40		
Total Carried Forward To Summary						

C2.11

SECTION 3 : EARTHWORKS						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3	SANS 1200 D & 200 DB	PIPE TRENCHES, MINOR EARTHWORKS & TRENCHES				
3.1	PSDB 8.3.2	<u>Excavation</u>				
3.1.1	8.3.2(a)	<u>Excavate in all materials for trenches, backfill, compact, and dispose of surplus/unsuitable material for pipes:</u>				
3.1.1.1		Excavate by hand in confined areas for pipe trenches or to locate and expose existing services where ordered by the Engineer				
3.1.1.1.1		<u>Up to and including 200mm ND for total trench depth:</u>				
3.1.1.1.1		Exceeding 0,0m but not exceeding 1.5m	m³	90223		
3.1.1.1.2		Extra over item for 3.1.1.1.1 for Intermediate rock	m³	13477		
3.1.1.1.3		Extra over item for 3.1.1.1.1 for hard rock	m³	2695		
3.1.1.1.4		Extra over item for 3.1.1.1.1 for bolder excavation	m³	1797		
3.2		<u>Slope Protection (Provisional)</u>				
3.2.1		Earth diversion berms as instructed by the Engineer	Nº	30		
3.3		Excavate in all materials beyond the limits of pipe trenches for thrust walls, valve chambers, anchor blocks where ordered by the Engineer:				
3.3.1		Over and up to 0,0 m 1,0 m	m³	18		
3.3.2		1,0 m 1,5 m	m³	21		
3.4	SABS 1200DK	Gabions and Pitching				
3.4.1	8.2.1 (a)	Surface preparation - cavities filled with excavated material	m²	24		
3.4.2	8.2.2	Gabions:				
3.4.2.1		2 m x 1 m x 1 m boxes	m³	10		
3.4.2.2		2 m x 2 m x 0,23 m boxes	m³	10		
3.4.2.3	8.2.4	Geotextile where ordered	m²	40		
3.4.2.4	8.2.5	Ordinary stone pitching	m²	40		
Carried Forward						

C2.12

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought Forward						
3.5	8.2.5 (a)	Services that Intersect a Trench:				
3.5.1		Stormwater pipes up to 450 mm dia	Nº	6		
3.6		Telkom and electric cables (underground) (no additional payment will be made for overhead telephone lines or poles)	Nº	6		
3.7	8.3.5 (b)	Services that adjoin a trench:				
3.7.1		Stormwater pipes up to 450 mm dia	m	100		
		Telkom cables (underground) (no additional payment will be made for overhead telephone lines or poles)	m	200		
	8.3.5	<u>EO Items B.3.3 for excavating, backfilling, compacting and reinstating trenches parallel to and within 1.0 m from: (rates to incl. for reinstating if damaged in any way by the Contractor):</u>				
		Wire fences	m	400		
		<u>EO Items B.3.3 for excavating, backfilling, compacting and reinstating trenches crossing beneath (rates to incl. for reinstating if damaged in any way by the Contractor):</u>				
		Wire fences	Nº	40		
		Excavation across gravel roads				
		<u>Selective excavation in all materials for trenches, backfill with stabilised 5% cement, compact and dispose of surplus material for trenches under gravel roads for pipes up to 300mm diameter (only one half of the road is to be opened at any one time)</u>				
		1,5m - 2.0m	m	240		
Total Carried Forward To Summary						

C2.13

SECTION 4 : BEDDING						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4	SANS 1200 LB & PS LB	BEDDING				
4.1	8.2.1 & PS LB 3.1	<u>Provision of Bedding from Trench Excavation</u>				
4.1.1	8.2.1 (a)	Selected granular material	m³	16229		
4.1.2	8.2.1 (b)	Selected fill material	m³	16229		
4.2	8.2.2	<u>Supply only of Bedding by Importation</u>				
4.2.1	8.2.2.1	<u>From other necessary excavations (Provisional)</u>				
4.2.1.1	8.2.2.1 (a)	Selected granular material	m³	8114.5		
4.2.1.2	8.2.2.1 (b)	Selected fill material	m³	8114.5		
4.2.2	8.2.2.3	<u>From Commercial sources</u>				
4.2.2.1	8.2.2.3 (a)	Selected granular material	m³	2704.8		
4.2.2.2	8.2.2.3 (b)	Selected fill material	m³	2704.8		
4.3	8.2.3	<u>Concrete Bedding Cradle (Provisional)</u>				
4.3.1		15/19 Grade concrete	m³	0.0		
4.4	8.2.4	<u>Encasing of Pipes in Concrete (Provisional)</u>				
4.4.1		Encasement of Pipe in 25/19 Grade concrete including all formwork and reinforcement (100kg steel per m³ concrete) for water crossings and road crossings. Refer to standard detail	m³	10		
4.5	8.2.4	<u>Thrust Blocks</u>				
4.5.1		Construct thrust blocks in 25/19 Grade concrete including all preparation work and formwork required. Refer to standard detail	m³	75		
4.6	8.2.5	Overhaul of Material for Bedding Cradle and Selected Fill Blanket (Provisional)	m³/km	3000		
Total Carried Forward To Summary						

C2.14

SECTION 5 : MEDIUM PRESSURE PIPELINES						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5	SANS 1200 L	MEDIUM PRESSURE PIPELINES				
		<u>Supply, lay, backfill, disinfect, join and test potable water pipelines. All works inclusive in the rate, except where specific items are provided. All activities in accordance with project specifications.:</u>				
		<u>HDPE Pipes</u>				
5.1.1		25mm dia. PN 12	m	305737		
5.1.2		50 mm dia. PN 12	m	97603		
5.1.3		63 mm dia. PN 12	m	14 329		
5.1.4		75 mm dia. PN 12	m	10 219		
5.1.5		90 mm dia. PN 12	m	13 199		
		<u>PVC-U Pipes</u>				
5.1.6		110mm dia. CL 12 uPVC	m	10 834		
5.1.7		160mm dia. CL 12 uPVC	m	14 260		
5.2	PSL 8.2.16	Pipeline Markers as per standard detail. Work to be executed by a nominated SMME sub contractor	Nº	1765		
5.3.1		Supply and install standpipe as per drawing UKDM-0056-08 complete including HDPE saddle, 32mm HDPE pipe (20m), tap and galvanised riser pipe, concrete work including shuttering, elbows, nipples, etc, as per standard drawings. Work to be executed by a nominated SMME sub contractor	Nº	4706		
5.4		<u>Thrust Blocks</u>				
5.4.1		Construct anchor/thrust blocks to Drawing No. UKDM-0057-01				
		<u>For tees, end caps and 90 degree bends:</u>				
5.4.1.1		50mm Diameter	Nº	18		
5.4.1.2		63mm Diameter	Nº	38		
5.4.1.3		75mm Diameter	Nº	14		
5.4.1.4		90mm Diameter	Nº	30		
5.4.1.5		110mm Diameter	Nº	18		
5.4.1.6		160mm Diameter	Nº	16		
5.4.1.7		200mm Diameter	Nº	3		
Total Carried Forward To Summary						

C2.15

SECTION 6 : PIPE FITTINGS AND SPECIALS						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	SANS 1200 L	PIPE FITTINGS AND SPECIALS				
	8.2.2 PSL 8.2.4 PSL 8.2.5	<u>Extra-over 8.2.1 for the Supplying, Laying and Bedding of Specials complete with Couplings as follows:-</u>				
5.2	8.2.4 PSL 8.2.6	<u>Supply, lay, joint and bed including cutting pipes where required for the following:</u>				
		HDPE Pipe Bends (PN 16)				
5.2.1		50mm dia. x 22.5° bends.	No.	87		
5.2.2		50mm dia. x 45° bends.	No.	77		
5.2.3		50mm dia. x 90° bends.	No.	113		
5.2.4		63mm dia. x 22.5° bends.	No.	9		
5.2.5		63mm dia. x 45° bends.	No.	12		
5.2.6		63mm dia. x 90° bends.	No.	29		
5.2.7		75mm dia. x 22.5° bends.	No.	30		
5.2.8		75mm dia. x 45° bends.	No.	50		
5.2.9		75mm dia. x 90° bends.	No.	0		
5.2.10		90mm dia. x 22.5° bends.	No.	46		
5.2.11		90mm dia. x 45° bends.	No.	32		
5.2.12		90mm dia. x 90° bends.	No.	8		
		uPVC Pipe Bends (PN 16)				
5.2.13		110mm dia. x 22.5° bends.	No.	8		
5.2.14		110mm dia. x 45° bends.	No.	11		
5.2.13		110mm dia. x 90° bends.	No.	27		
5.2.14		160mm dia. x 22.5° bends.	No.	2		
5.2.15		160mm dia. x 45° bends.	No.	19		
5.2.16		160mm dia. x 90° bends.	No.	15		
5.2.17		200mm dia. x 22.5° bends.	No.	7		
5.2.18		200mm dia. x 45° bends.	No.	8		
5.2.19		300mm dia. x 22.5° bends.	No.	8		
5.2.20		300mm dia. x 45° bends.	No.	8		
5.2.20a		300mm dia. x 90° bends.	No.	8		
Carried Forward						

C2.16

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought Forward						
		Socketed Reducers (PN16)				
5.2.21		63mm x 50mm	No.	50		
5.2.22		75mm x 50 mm	No.	6		
5.2.23		75mm x 63mm	No.	8		
5.2.24		90mm x 50mm	No.	10		
5.2.25		90mm x 63 mm	No.	24		
5.2.26		90mm x 75mm	No.	36		
5.2.27		110mm x 63mm	No.	10		
5.2.28		110mm x 75mm	No.	10		
5.2.29		110mm x 90mm	No.	14		
5.2.30		160mm x 90mm	No.	6		
5.2.31		160mm x 110mm	No.	2		
5.2.32		200mm x 160mm	No.	4		
		Equal Tees (PN16)				
5.2.33		50mm x 50mm	No.	36		
5.2.34		63mm x 50mm	No.	20		
5.2.35		63mm x 63mm	No.	40		
5.2.36		75mm x 50mm	No.	24		
5.2.37		75mm x 63mm	No.	12		
5.2.38		75mm x 75mm	No.	18		
5.2.39		90mm x 63mm	No.	50		
5.2.40		90mm x 75mm	No.	10		
5.2.41		90mm x 90mm	No.	26		
5.2.42		110mm x 63mm	No.	18		
5.2.43		110mm x 75mm	No.	2		
5.2.44		110mm x 90mm	No.	18		
5.2.45		110mm x 110mm	No.	10		
Carried Forward						

C2.17

ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
Brought Forward						
5.2.46		160mm x 63mm	No.	14		
5.2.47		160mm x 90mm	No.	10		
5.2.47		160mm x 90mm	No.	4		
5.2.48		160mm x 110mm	No.	20		
5.2.49		160mm x 160mm	No.	10		
5.2.50		200mm x 110mm	No.	4		
5.2.51		200mm x 200mm	No.	2		
		Couplings (PN16)				
5.2.52		40mm dia	No.	16		
5.2.53		50mm dia	No.	20		
5.2.54		63mm dia	No.	24		
5.2.55		90mm dia	No.	32		
5.2.56		110mm dia	No.	14		
		End Plugs (PN16)				
5.2.57		50 mm dia, end plug (Class 16)	No	24		
5.2.58		63 mm dia end plug (Class 16)	No	2		
5.2.59		75 mm dia end plug (Class 16)	No	2		
		Flanged Adaptors				
5.2.60		50 mm dia - flanged adaptor with galvanised	No	26		
5.2.61		63 mm dia - Flanged adaptor with galvanised	No	16		
5.2.62		90 mm dia - Flanged adaptor with galvanised	No	22		
5.2.63		Allowance for installation of Bulk Meters at reservoir outlets and DMAs as per Drg Nond_001	Sum	2		
5.2.64		150mm diameter	No	1		
5.2.65		100mm diameter	No	3		
Total Carried Forward To Summary						

C2.18

SECTION 7 : VALVES AND CHAMBERS						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
7		VALVES				
	8.2.3	<u>Extra-over 8.2.1 for the supplying, fixing and Bedding of Valves as indicated below:</u>				
7.1		<u>Isolation Valves Complete with Protective Chamber</u>				
7.1.1	PSL 3.13.2	Supply and install flanged Resilient seal Gate valves complete with prefabricated valve chamber as per drawing UKDM-0057-05, PN 16 with non-rising spindle, Clockwise closing, including all gaskets, bolts, nuts and washers as per detailed drawings	No.			
7.1.1.1		50mm diameter	No.	9		
7.1.1.2		63mm diameter	No.	3		
7.1.1.3		75mm diameter	No.	8		
7.1.1.4		90mm diameter	No.	10		
7.1.1.5		110mm diameter	No.	6		
7.1.1.6		160mm diameter	No.	2		
7.1.1.7		200mm diameter	No.	3		
7.2		<u>Air Valves Complete with Protective Chamber</u>				
7.2.1	8.2.5	Supply and install Air Valve assemblies complete with prefabricated chamber as per detailed drawing UKDM-0057-02 (25 mm dia air valve Vent-o-Matt RBX or similar approved)	No.	65		
7.3		<u>Scour Valves Complete with Protective Chamber</u>				
7.3.1		Supply and install Bulk Meter assemblies complete with precast chamber as per detailed drawing UKDK-0057-03. Rate is inclusive of valve chamber and all specials.	No.	4		
7.4		<u>Check / Non Return Valves Complete</u>				
	8.2.5	Supply and install Bulk Meter assemblies complete with precast chamber as per detailed drawing UKDK-0057-04. Rate is inclusive of valve chamber and all specials.				
7.4.1		100mm	No.	4		
7.4.2		150mm	No.	2		
Total Carried Forward To Summary						

C2.19

SECTION 8 : PUMP STATIONS						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
8		PUMP STATIONS				
8.1		<u>CONSTRUCTION OF ESINGENI RESERVOIR INLET BOOSTER PS</u>				
8.1.1		Supply equipment & accessories material, remove old equipment, install, test, commissioning for the refurbishment of 2No. 3 phased centrifugal pump with Variable speed drive. Pump Duty to deliver 35L/s flow rate through a 1.3km 200mm ND steel pipeline. Complete pumpset installation with electro-mechanical components, power supply, MCC, DB panels and switchgear, pipe fittings and base frame mountings and other instrumentation accessories as needed and as directed by the Engineer. The tendered rate shall be inclusive of all supplier workshop vendor packaged equipment info, fabrication drawings, relevant tests, O&M manuals and 12 month warranties required. All materials and workmanship to conform to specifications. Allow for pipe manifold for inlet and outlet into existing pipeline. Pump house inclusive.	Prov Sum	1	R 1 700 000.00	R 1 700 000.00
8.1.2		Contractor's mark up on item 8.1.1 above	%	R 1 700 000.00		
Total Carried Forward To Summary						

C2.20

SECTION 9 : PREFABRICATED STEEL TANKS						
ITEM	PAYMENT	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
9		PREFABRICATED STEEL TANKS				
9.1		<u>Storage Tanks (Including inlet/outlet control chamber)</u>				
9.1.2	SANS 1039 & SANS 121	Provisional sum for the supply and erection of galvanised mild steel tank and stands or similar approveds with corrosion resistance qualities with handrails, walkway and lighting protection. The pressed steel to conform to SANS 1039:2004 all inclusive and be galvanised to SANS 121 as a minimum.				
9.1.2.1		Provisional sum for the supply, delivery and erection and assembly of a 250kl Prestank or similar approved pressed steel tank and associated pipework on a 20m Steel Structure, Incl Float Control Valve and elevated walkway and support structure.	No	2	R 2 000 000.00	R 4 000 000.00
9.1.2.2		Contractor's mark up on item 9.1.2.1 above	%	R 4 000 000.00		
9.1.2.3		Provisional sum for the supply, delivery and erection and assembly of a 500kl Prestank or similar approved pressed steel tank and associated pipework on a 20m Steel Structure, Incl Float Control Valve and elevated walkway and support structure.	No	1	R 4 000 000.00	R 4 000 000.00
9.1.2.4		Contractor's mark up on item 9.1.2.3 above	%	R 4 000 000.00		
9.2		Monitoring System				
9.2.1		Provisional sums fo Implementation of a SCADA system covering reservoir levels, flow monitoring and pressure monitoring	Sum	1	R 400 000.00	R 400 000.00
9.2.1.1		Contractor's mark up on item 9.2.1 above	%	R 400 000.00		
9.2.2		Provisional sum for Automated water balance generation from collected data from flow and pressure	Sum	1	R 300 000.00	R 300 000.00
9.2.2.1		Contractor's mark up on item 9.2.2 above'	%	R 300 000.00		
9.3	SANS 1200 G 8.1.3	FOUNDATION REINFORCEMENT DETAILS:				
9.3.1		Mild steel bars:				
		R8	kg	1464		
9.3.2		High tensile bars:				
		Y12	kg	2981		
		Y16	kg	5184		
9.4		FOUNDATION CONCRETE DETAILS:				
9.4.1	8.4.3	Strength concrete, Grade 30 MPa/19 mm: Tank stand	m³	270		
9.4.2		Excavations and formwork preparations for ALL reservoir site pconcrete latforms	No	18		
Total Carried Forward To Summary						

SUMMARY OF BILL OF QUANTITIES

SECTION	DESCRIPTION	AMOUNT
1	SECTION 1: PRELIMINARY AND GENERAL	
2	SECTION 2 : SITE CLEARANCE	
3	SECTION 3 : EARTHWORKS	
4	SECTION 4 : BEDDING	
5	SECTION 5 : MEDIUM PRESSURE PIPELINES	
6	SECTION 6 : PIPE FITTINGS AND SPECIALS	
7	SECTION 7 : VALVES AND CHAMBERS	
8	SECTION 8 : PUMP STATIONS	
9	SECTION 9 : PREFABRICATED STEEL TANKS	
10	SUB-TOTAL (A)	
11	Add: Contingencies @ 5%	
12	SUB-TOTAL (B): DIRECT COSTS - CONSTRUCTION	
13	Add - 15% VAT	
14	TOTALS CARRIED TO FORM OF TENDER	

.....
Signature.....
Date.....
Position.....
Name of bidder

C3: SCOPE OF WORK

	<u>Page N°</u>
C3.1: DESCRIPTION OF WORK	C3.8
C3.2: ENGINEERING	C3.10
C3.3: PROCUREMENT	C3.15
C3.4: CONSTRUCTION	C3.22
C3.5: MANAGEMENT	C3.32
C3.6: STANDARD SPECIFICATIONS	C3.55
C3.7: PROJECT SPECIFICATIONS	C3.60
C3.8: PARTICULAR SPECIFICATIONS	C3.146

C3.1 DESCRIPTION OF THE WORKS

C3.1.1 Employer's Objectives

The uMkhanyakude District Municipality (UKDM) is a Water Services Authority (WSA) responsible for managing water supply to over 690 000 human inhabitants within the District's jurisdictional area DC27 in the KZN far northern region. Furthermore, the Nondabuya area located within the Jozini Local Municipality (LM) KZN 272 of the UKDM jurisdiction required an upgrade in water distribution system to match the community water supply needs.

The Nondabuya Water Supply System has been designed to supply water into Wards within the footprints of Wards 6, 8, 9, 10, 13, 14 and 19 under the New Demarcation.

C3.1.1.1 Background and Overview of the Works

The system was designed to be fully dependent on Esingeni Reservoir (located at an elevation of 253.15amsl), which receives water from the Othobothini Water Treatment Works. Water was to flow by gravity from Esingeni reservoir into the entire supply zone, with Phase 1 feeding off the Esingeni reservoir hydraulic head into Wards 9 & 19, and Wards 10, 13 & 14 feeding off the BPT downstream of Esingeni reservoir (130amsl). The proposed BPT (located at an elevation of 133m) in Phase 2 was to reduce pressure before subsequent supply into the rest of Phase 2 and entire of Phase 3. However;

- The gravity main only receives 4,9Ml/day on average from Jozini Main reservoir – this volume is significantly lower than the required 6,8Ml/day demand requirements for the system.
- The bulk main is infested with unauthorized connections that are not professionally installed, leading to huge losses through leaks due to improper workmanship as well as high pressures.
- The unauthorized connections lead to a drop in the hydraulic grade line, reducing the rate of flow into the two higher reservoirs of Esingeni and Bhekindoida.
- The level of water inside Esingeni reservoir is always low (low rate of inflow versus high rate of outflow due to demand), resulting in very low operational pressures within the Nondabuya Supply Zone.

Thus the system has been designed to be optimised by receiving water from three sources rather than one:

1. Esingeni reservoir from oThobothini WTWs
2. Nondabuya WTWs
3. Mashabane WTWs

C3.1.1.2 Scope of Works

The following is the scope of work under UKDM that is relevant to the Nondabuya WSS's footprint, and it takes into consideration the scopes being covered by UUW under the Sec 63 Directive:

C3.24.

- i) Construction of Esingeni reservoir inlet booster pump station;
- ii) Installation of new 1 x 500KL elevated reservoirs at Nondabuya;
- iii) Installation of new 2 x 250KL elevated reservoirs at Madonela;
- iv) Refurbishment of existing 2 x 225KL reservoirs at Nondabuya;
- v) Installation of 4706 yard connections;
- vi) Laying of 98.9km of 50mm reticulation pipelines;
- vii) Laying of 13.7km of 63mm reticulation pipelines;
- viii) Laying of 9.8km of 75mm reticulation pipelines;
- ix) Laying of 17.7km of 90mm reticulation pipelines;
- x) Laying of 10.4km of 110mm secondary bulk pipelines;
- xi) Laying of 13.6km of 160mm secondary bulk pipelines;
- xii) Installation of associated isolation, scour and air valves; and
- xiii) Reworks on unfinished works in Phase 1 & 2

C3.1.1.3

Location of the Works and Access

C3.1.1.4

The works are located in the Jozini Local Municipality within Nondabuya Area.

Temporary Works

The Contractor is responsible to design and provide all temporary works required for this Contract. Temporary works shall include those works required to provide and maintain suitable access to and within the pipe yards from which pipe is to be drawn and the control of vegetation in terms of this specification. The Contractor shall be responsible to obtain the use of suitable land for the site camp and to pay all rentals due and fulfil the requirements of the landowner and others connected thereto. The Contractor shall be responsible to establish, maintain and secure his/her site office, workshop, storage facilities for pipes, plant, equipment, fittings, fuel, lubricants and all other materials required in the performance of this contract, together with all items of the requirements of the contract as described in C3 of this document.

C3.2: ENGINEERING

C3.2 ENGINEERING**C3.2.1 Design Services and Activity Matrix**

Description	Responsible Party
Works designed by	Employer/Employer's Agent
Design of Alternatives proposed (if any)	Contractor
Temporary works	Contractor
Preparation of As-Built Drawings	Contractor

C3.2.2 Employer's Design

The Employer will issue tender and construction drawings. Drawings issued to tenders as part of the tender documents must be regarded as provisional and preliminary for the Tenderer's benefit to generally assess the scope of work. The drawings are issued as a separate volume (Volume 2) to this document and form part of the tender.

C3.2.3 Drawings

The drawings issued to tenderers as part of the tender documents must be regarded as provisional and preliminary for the tenderer's benefit to generally assess the scope of work. The drawings are issued separately to this document.

At commencement of the contract, the Employer's Agent will deliver to the Contractor three copies of the construction drawings and any instructions required for the commencement of the works. From time to time thereafter during the progress of the works, the Employer/ Employer's Agent may issue further drawings or revisions for construction purposes as may be necessary for construction, completion and defects correction of the works. The work shall be carried out in accordance with the latest available revision of the drawings approved for construction.

The following drawings are applicable to the Contract and are bound separately:

Drawing N°	Drawing Title
UKDM-0057-01	Typical Details for Thrust Blocks
UKDM-0057-02	Typical Details for Air Valve Installation
UKDM-0057-03	Typical Details for Scour Valves Installation
UKDM-0057-04	Undreground Bulk Meter or PRV Installation
UKDM-0057-05	Inlet Valve Chamber Details
UKDM-0057-06	Typical Details for Elevated Stand Tank
UKDM-0057-07	Typical Detail for Pipe Marker
UKDM-0057-08	Typical Detail for Stand Pipe/ Yard Connection
UKDM-0057-09	Pump House and MCC Room Foundation Details
UKDM-0057-10	Typical Detail for Name Board
UKDM-0057-11	System Layout

The Contractor will be required to mark up one complete set of prints of the construction drawings with all relevant as-built information and to submit these to the Employer's Agent Representative prior to issue of the Certificate of Practical Completion.

C3.2.4 Contractor's Design

The Contractor's responsibility for design and documentation includes, but is not necessarily limited to, the descriptions below (C3.2.4.1 and following):

C3.2.4.1 *Design of Alternatives*

Alternatives shall not be acceptable at Tendering stage. Should the Contractor, following appointment, propose any alternative to the Employer's design, such proposal shall only be deemed valid if it is accompanied by adequate and suitable sketches or drawings detailing the extent of the alternative and the component, sufficient to establish the means of execution the work, applicable fabrication drawings, etc. and provided that such submission is also accompanied by Method Statements, and specifications where appropriate, detailing how the Contractor proposes to go about the work from the ordering of materials, organizing of plant, steps in executing the alternative proposal, together with proposed list of personnel involved, tools, health and safety measures and measures for environmental compliance.

Such alternative shall be provided adequately in advance of the proposed work to allow for sufficient consideration and consultation and shall be subject to the approval of the Employer's Agent

C3.2.4.2 *Design of Temporary Works*

The Contractor will be responsible for the design of all temporary works and all construction methods, including those for the tie-ins and interconnecting works and all shoring and lateral support that may be required for trenching. The Contractor will also be responsible for the preparation of method statements as required and for preparing designs for the removal, relocation and/or reconstruction of certain existing facilities on privately owned properties that will be affected by the construction of the new pipeline.

The Contractor shall be responsible for the layout of his site camp and fabrication areas, construction and other working areas, management of the pipe yards and all temporary works, including construction access, culverts and drainage. The Contractor shall also be responsible for providing and maintaining suitable access to and within the pipe yards designated for the collection of 'free issue' pipe together with the fencing and control of vegetation of the pipe yards.

The Contractor is referred to the Employer's Environmental Specification and Environmental Management Programme (EMPr) in regard to all aspects of the temporary works.

C3.2.4.3 *Other Documentation Required from Contractor*

Construction Dossier

The Contractor shall be responsible to produce a Construction Dossier for the entire pipe laying. The Construction Dossier shall track the entire process of pipe handling, testing, repairs, laying and welding through to completion and commissioning of the works and shall incorporate and integrate the construction records with the Independent Inspection Reports from the pipe supply contracts as provided by the Employer's Agent.

Operation and Maintenance Manual

The Contractor shall be responsible to produce the Operations & Maintenance (O & M) Manual for the Works. The O & M manual shall document all requirements for correct operation and maintenance of the works. Two draft copies of the O & M Manual shall be issued to the

Employer's Agent prior to commissioning of the Works. Before the Certificate of Practical Completion is issued (after the successful completion of the Trial Operational Period) four final copies of the final approved version of the O & M Manual shall be issued to the Employer's Agent.

Binders with hard plastic covers and four-ring spring clip holders shall be used. Binders shall not be over-filled to allow use without damage to the contents. A spare binder shall be provided for every three used, marked with the contract information. At least one set shall contain original copies.

The manual shall be of a standard acceptable to the Employer's Agent. Title labels which include contract number, title, location, Contractor's name as well as the equipment or fittings used together with volume number and contents shall be fixed on the front as well as the spine of the binders.

Manuals shall be in English only, with sections of equipment arranged by labelled dividing separator sheets. Where standard literature is obtained from suppliers or manufacturers, this shall be neatly photocopied in A4 size, with the applicable sections clearly marked, omitting duplicate sections in languages other than English.

Comprehensive indexes shall be included, with separate sections (with their own index) where required, as follows:

- Record (as-built) drawings referenced to the drawings list in C3.2.3.
- Fittings and equipment supplied • A comprehensive schedule of routine maintenance for the works.

C3.3: PROCUREMENT

C3.3 PROCUREMENT**C3.3.1** *Preferential procurement procedures***C3.3.1.1** *Requirements*

The uMkhanyakude District Municipality wishes to empower the Local Emerging Sub-Contractors residing within the project area. It shall therefore be mandatory to sub-contract a minimum of 30% of the contract value to approved local disadvantaged companies with a registered address within the uMkhanyakude District. The conditions associated with the granting of preferences, if any, and the sanctions relating to a breach of preferencing conditions are contained in the Tender Data.

Although the Contractor is at liberty to propose other items of work for subcontracting the Employer has designated the following items from the contract as mandatory sub-contracting items reserved for Local Emerging Sub-Contractors:

1. Supply and construct pre-cast concrete valve chambers;
2. Supply and install pipeline marker posts;
3. Rehabilitation of roads disturbed by trenching;
4. Supply and erecting of fencing

The administration of the mandatory sub-contract work is detailed in this Section C3.3.

C3.3.1.2 *Resource standard pertaining to targeted procurement*

The Employer has determined that 100% of the Contractor's unskilled labour force shall be made up from the Local Municipality area. Local labour employed on the contract shall be paid in accordance with the local labour rate and all statutory conditions of employment shall be met including registration with the Unemployment Insurance Fund.

C3.3.1.3 *Contracts of Employment*

All employees of the Contractor shall be issued with a written contract of employment which shall be signed by the Contractor and the employee. The contracts shall be in isiZulu and in English.

Contracts of employment shall incorporate, inter alias, the following:

- personal particulars;
- job title and job description;
- employment period, including any probation period, which probation period shall not exceed 13 weeks;
- hours of work, statutory holidays, vacation, sick leave;
- remuneration, including wage rates for overtime, and any monetary allowances and deductions applicable to any probationary period and the time after its satisfactory completion;
- method of payment;
- medical and any other social benefits;
- conditions precedent to termination of employment;

Contracts of employment shall be accompanied by a written statement of company procedures covering such matters as training, promotion and redundancy policies, procedures for dealing with grievances, disciplinary procedures, protective clothing and occupational safety, and the like.

C3.3.1.3 *Induction Programme*

Before starting training or regular working, all employees shall attend an induction programme at which, inter alia, methods of working, site safety procedures, environmental policies, and the employees' role in relation to them shall be addressed. The employees shall be given an introduction to the Contractor's general industrial relations policy and procedures, covering such subjects as selection for promotion and redundancy, any bonus schemes, procedures for dealing with grievances, disciplinary procedures, and the like. The Contractor shall be responsible for compiling, organising and executing this induction programme.

C3.3.1.4 *In-task Training*

In-task training of the workforce is a general responsibility of the Contractor to ensure that his workforce is sufficiently skilled, Health and Safety aware and environmentally compliant as per the Employer's Environmental Specification. The Contractor shall provide in-task training of local labour during the construction of the works and at this own cost. In-task training shall consist of training and guidance of team leaders, assistants, and labour in those construction activities where the labour is engaged. The in-task training shall cover all training and guidance required to ensure that the leaders and labour are able to carry out the project tasks in accordance with the requirements of the project specification.

All personnel involved in construction shall also be trained in the Employer's Environmental Management System. The in-task training shall be carried out by the Contractor's own key and skilled personnel or by a mentor appointed for the purpose and approved by the Employer.

C3.3.2 *Enhancing Participation through Labour Intensive Construction*

It is the intention of the Employer to enhance local employment as far as possible. Certain tasks may be suitable for use of labour intensive methods. The Contractor shall plan his works in general to make maximum use of labour intensive methods in addition to the use of plant where appropriate.

The tasks that may be suitable for use of labour intensive methods are:

- Pipeline trench excavation in soft material for trench depths not exceeding 1,5m depth;
- Placement of bedding cradle and bedding blanket;
- Backfilling of pipe trenches
- Construction of Gravelled access roads

Within four weeks of commencement the Contractor shall present a plan for utilization of labour indicating the sectors of work where labour intensive construction is proposed, the estimated labour complement and programme. This plan will be for discussion with the CLO and Employer.

Machine excavation shall be used where the classification of excavation is 'intermediate' or 'hard' and for excavation of pipe trenches beyond 1,5m in depth. Machine excavation may also be used where the community reports that the work is too hard for manual labour. The CLO will be the liaison person in this respect.

C3.3.3 *Subcontracting*

This sub-section covers the subcontracting of specialist work at the Contractor's choice, mandatory sub-contracting to local SMMEs and the use of selected sub-contractors identified by the Employer.

C3.3.3.1 Subcontracting at Contractor's choice

Subcontracting of specialised portions of the work is permitted in principle up to a maximum of twenty five percent (25%) in total of the approved contract value. Should the Tenderer wish to employ Sub-Contractors of his own choice for part of the works, this is to be clearly indicated in Schedule T of the Returnable Schedules, showing the full names and addresses of all proposed Sub-Contractors for which approval of the Employer's Agent is sought and stating the section of the works that each will be handling.

Subsequent to contract award the written approval of the Employer shall be required prior to the engagement of any sub-contractor not proposed in the tender and accepted by the Employer. The appointment of subcontractors shall only be formalised on the basis of the presentation of a suitable and compliant sub-contracting agreement in the CIDB format or other acceptable format.

C3.3.3.2 Mandatory Subcontracting – SMMEs

Mandatory sub-contracting to local SMME's also applies under this contract (refer C3.3.1.1). The process of mandatory sub-contract work shall be as follows:

1. The Contractor shall indicate on his programme at what stage the sub-contractors will be required for the various work items
2. The Employer's ISD Consultant shall identify eligible candidates as Local Emerging SubContractors and present these to the Contractor ahead of the deadline for appointing the subcontractors.
3. The Contractor shall select from the identified Local Emerging Sub-Contractors.

An item has been included in Section 1 (Preliminary and General) of the Bills of Quantities to enable tenderers to price for their costs associated with the use of local disadvantaged SMMEs, namely, the identification, selection, invitation of quotations, negotiations, award of a sub contract(s) and then the training and assisting and supervising of the SMME(s). It is specifically noted that the Employer's requirement for SMMEs to be engaged will not in any way relieve the main Contractor of any of his obligations in terms of the Contract.

In the event that the Employer's ISD Consultant fails to identify sufficient available candidates as Local Emerging Sub-Contractors ahead of the deadline for the employment of such subcontractors, as shown on the Contractor's approved programme, the Contractor shall be released from the obligation of mandatory subcontract work and shall be free to appoint a sub-contractor of his own choice or to undertake the work directly using own resources.

C3.3.3.3 *Selected Subcontractors*

This sub-section covers specialist work for which the Employer retains the right to identify the specialised service provider to be used. The areas of work to which this may apply are described below.

C3.3.3.3.1 Cathodic Protection (CP) Installation

Details and a design of the cathodic protection installations that are to be carried out under this Contract will be prescribed by a 'Selected Sub-contractor' to the Contractor. A Provisional Sum has been included in the Bill of Quantities to cover the cost of the work to be carried out by the selected sub-contractor. The Contractor shall be responsible for co-ordination with the subcontractor in the timely completion of these installations.

As some of the CP design can only be carried out as field measurements are taken during the construction phase under this Contract, it is not possible to provide complete details in this document of the CP installations that will be required. The following data serves to indicate the

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nature of the scope of work that the 'selected sub-contractor' will be required to carry out in coordination with the Contractor.

Temporary CP:

To prevent corrosion damage to steel pipe prior to the installation of a permanent CP system a method of temporary protection may be specified. This may comprise sacrificial anodes to be connected to the pipes or an electrical method of protection, both methods involving a continuity connection to the pipe.

Cross Bonding:

Cross bonds may be installed between the pipeline and other pipelines and/or structures. Cross bonds usually comprise copper wires/cables welded at each end to the steel pipelines.

Continuity Bonding:

As it is essential to ensure that there is electrical continuity along the full length of the pipeline as it is being installed, electrical continuity bonds will have to be installed as the pipeline construction progresses. Electrical continuity bonds usually comprise copper wires/cables welded at each end to the steel pipelines at flanged and flexible coupled joints and also at flanges at air valve and scour valve installations. They are also required across insulating flanges and flow metering installations.

All work relating to permanent continuity bonding will be carried out by the "CP Selected SubContractor". All work associated with any temporary continuity bonding required to ensure that no section of pipeline is laid such that it is discontinuous from the main pipeline shall be carried out by the Contractor at no cost to the Employer. Temporary electrical continuity bonds shall comprise two parallel 120 square mm PVC coated stranded copper cables with ends securely clamped onto the ends of the steel pipes.

Monitoring Stations:

Monitoring stations are used for the ongoing testing of CP protection levels from an above ground point on the pipeline and may be required under this contract. These monitoring stations are usually small galvanized steel boxes placed within the pipeline servitude at regular intervals (normally 500 m apart), and have within them copper wire or cable connection to the pipeline and a stationary reference cell and a metal coupon.

Test Points:

Test points will be required and usually comprise stainless steel threaded rods installed into the concrete walls of a valve chambers at regular intervals along the pipeline route. Each rod is usually located above the external ground level of the chamber to allow CP personnel to do spot checks on the pipe's protection levels without having to open the valve chambers.

Transformer Rectifier Units (TRU):

Transformer rectifier units may be required and are used to generate DC power supplies to afford protection to the pipelines. These require an AC power supply from Eskom, an attachment to the pipeline, an appropriately sized ground bed, and a stationary reference electrode.

C3.3.3.3.2 Environmental Rehabilitation by Selected Sub-Contractor

Whilst the Contractor will be required to carry out rehabilitation works as described and/or specified elsewhere in the document and/or to reinstate all areas affected by the works to conditions no worse than they were prior to the commencement of construction, the Contractor

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will be required to appoint a specialist environmental rehabilitation sub-contractor to carry out rehabilitation works at specific locations as described in the Environmental Management Plan to be drawn up as a product of the Environmental Basic Assessment to be undertaken.

A Provisional Sum has been included in the Bill of Quantities to cover the cost of the work to be carried out by the selected sub- contractor.

C3.3.3.3 Telemetry

A Provisional Sum has been included in the Bill of Quantities to cover the cost of the work to be carried out by the selected sub- contractor.

C3.3.4 *uMkhanyakude Municipality Code of Conduct applicable to the Procurement of Goods, Services, Engineering and Construction Works*

The Contractor shall undertake the contract in accordance with the uMkhanyakude Municipality Code of Conduct applicable to the Procurement of Goods, Services, Engineering and Construction Works. The Contractor shall make his/her own arrangements at own cost to obtain a copy of the Code of Conduct.

C3.4: CONSTRUCTION

C3.4 CONSTRUCTION**C3.4.1** *Applicable Specifications***C3.4.1.1** Standard Specifications

The standard specifications on which this contract is based are the South African Bureau of Standards Standardised Specifications for Civil Engineering Construction SABS 1200 as listed in C3.6 of the Scope of Work. The various SANS specifications referred to in this document are listed in C3.6 and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

The standardised specifications (SABS 1200) must be read in conjunction with the new SANS 1921 family of standards. In case of any discrepancy or conflict between the two, the SABS 1200 specification shall take precedence and shall govern.

Refer also to the Preface on interim situation until full suite of SANS 2001 Series of Specifications is available, on the first page of the Project Specification.

The term "project specifications" appearing in any of the SABS 1200 standardised specifications is deemed to be equivalent to the term "scope of work" in SANS Specifications.

The variations and additions to the standard specifications are prefixed PS and take precedence over the SABS Standardised Specification.

Where a particular specification is in conflict with either the variations and additions to standardized specifications or the SABS Standardised Specifications, the particular specifications shall take precedence.

C3.4.1.2 Applicable national and international standards

Wherever possible items and materials for construction of the works shall comply with the relevant South African Bureau of Standards Specifications and with the British Standards where these are applicable in the absence of local standards.

The Contractor, when using materials conforming to a Standard Specification shall if called upon furnish the Employer's Agent with certificates of tests showing that the materials do so conform.

C3.4.1.3 Particular / generic specifications

The particular specifications are included as C3.8 and take precedence over the Standard Specifications, but not over the Project Specifications.

C3.4.1.4 Certification by Recognised Bodies

Wherever not specified otherwise, items and materials for construction of the works shall comply with the relevant South African Bureau of Standards Specifications and with the British Standards where these are applicable in the absence of local standards.

The Contractor, when using materials conforming to a Standard Specification shall if called upon furnish the Employer's Agent with certificates of tests showing that the materials do so conform.

C3.4.2 *Plant and Materials*

Steel pipe in the three diameters required for the majority of the contract will be supplied by the Employer. This refers to DN700 plain ended pipe for butt welding and DN200 belled end pipe for fillet welding. All of this pipe stock is CML lined and generally FBMDPE coated, with a smaller quantity being three layer PE. This material will be drawn from existing stock in pipe yards in the

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locations indicated. The Contractor shall be responsible for the locating, inspection, uplifting and transport to site of the pipes to be used under the contract and shall point out any defects to the Employer's Agent Representative. Pipes found to be defective will be replaced or repaired at the discretion of the Employer.

Any defects found prior to handling of pipes by the Contractor shall be pointed out to the Employer's Agent. Should the Employer exercise the option of repairing the defect, this will be done at the Employer's expense. A provisional sum in the Preliminary & General section of the Bill of Quantities exists for this purpose. Once the Contractor has uplifted the pipe the responsibility for quality of the pipe, including its coating and lining, shall become that of the Contractor.

Plant and materials that are to form part of the permanent works shall be required to conform to the specifications herein. Prior to acceptance of materials on the site the Contractor shall therefore submit for prior approval details of the proposed product and manufacturer, including brochures and technical information, and including typical quality test routines and validation certificates. Rejection and replacement of materials due to lack of prior approvals shall be at the contractor's expense. Delay in ordering due to late submission of information to the Employer's Agent shall be deemed to be a delay at the Contractor's own responsibility.

Certain materials are subject to inspection at the site of the manufacturer's works by an Independent Inspection Authority appointed by the Employer's Agent. The Contractor shall be responsible to arrange the timely attendance of the inspection authority. Acceptance of materials on site shall be subject to Employer's Agent approval and will generally not be granted in the absence of inadequate or missing Quality Assurance information and Material Data Sheets.

The storage of plant and materials on site is at the Contractor's responsibility. The Contractor shall take adequate precautions to safeguard the plant and equipment and shall be liable to remedy any defects or replace any plant and equipment damaged in the course of transport, handling and storage and in the process of incorporation in the works and testing up to the point of acceptance of the works by the Employer.

C3.4.3

Construction equipment

No construction equipment will be supplied by the Employer under this Contract. All construction equipment required for the completion of the works shall be provided by the Contractor.

Equipment to be used on site shall be well maintained and, if road going, in possession of valid roadworthy certificates. Leaking of fuel or lubricant, or excessive or objectionable noise or exhaust emissions, shall be adequate grounds for instruction to remove the plant from the site, which removal shall be done within 24 hours.

The Contractor shall be responsible for determining the load clearance limits existing at the time and ensuring that his construction equipment does not exceed such limits. Before moving any heavy construction traffic onto highways, roads and bridges, the Contractor shall make suitable arrangements with the appropriate government authorities and obtain their approval for the passage of such traffic.

The Contractor shall not travel tracked vehicles or plant on any bituminous sealed road surface. Only rubber tyre vehicles conforming to applicable load restrictions will be permitted to use bituminous sealed roads.

The Contractor shall take note of the work activities that are subject to mandatory Labour Intensive Construction Methods and shall make adequate allowance for hand tools and PPE sufficient to complete these work activities according to programme.

C3.4.4

Existing Services

C3.4.4.1 Known services

All known services will be shown to the Contractor. The Contractor will be required to contact all service owners and ascertain the location and status of all services irrespective of whether they are shown to him/her or not. The Contractor is responsible to confirm with the Employer's Agent Representative the location of services prior to commencing excavations.

C3.4.4.2 Treatment of Existing Services

The Contractor shall inform the Employer's Agent of all services affected or permanently affected by the works and services shall not be exposed, re-routed or modified and without the written approval of the service owner. Existing services shall be protected as required, including re-routing of traffic, hand excavation in the vicinity of buried services and strutting or otherwise supporting services that cross trenches or excavations.

C3.4.4.3 Use of Detection Equipment

Where the presence of underground cables is suspected the Contractor shall use such methods as necessary, including cable or metal detectors, to prevent unnecessary damage and consequent delay and cost of repair.

C3.4.4.4 Damage to services

The Contractor will be held responsible for any damage to known existing services caused by or arising out of his operations and any damage shall be made good at his own expense. Damage to unknown services shall be repaired as soon as possible and liability shall be determined on site when such damage should occur.

C3.4.5 *Site Establishment*

C3.4.5.1 Services and Facilities Provided by the Employer

C3.4.5.1.1 *Contractor's Site Camp & Depot (Read with SANS 1921 - 1: 2004 clause 4.14)*

The Employer will not provide sites for the Contractor's establishment but will indicate the possible site(s) for the Contractor's site camp and fabrication area. It shall be the Contractor's responsibility to obtain permission for the use of the land and to negotiate the terms of use with the owner(s).

The Contractor will be drawing pipe stock from pipe yards in the vicinity of the site. The location of these sites is shown in the Locality Plan. If indicated by the Employer the Contractor shall be required to provide access to and co-ordinate with other Contractors drawing pipe stock from the same pipe yards for other projects for the same Employer.

No housing is available for the Contractor's employees and the Contractor shall make his/her own arrangements to house his/her employees and to provide all necessary transport arrangements.

No informal housing or accommodation on the site will be allowed.

C3.4.5.1.2 *Water Supply*

uMkhanyakude District Municipality is the Water Supply Authority in the area and is the owner of the existing bulk water infrastructure and the (somewhat limited) water distribution networks.

The Contractor shall make his own arrangements with the Employer for a temporary metered connection for construction purposes and for the conveying of the water to the point(s) required. The Contractor will be required to pay all connection fees and the cost of all water drawn from

the Employer's water supply system at the ruling tariffs in force at the time and his tender will be held to include for all such requirements throughout the duration of the Contract.

Water for scouring, filling, testing and disinfecting the pipelines laid under this Contract, and for filling and disinfection of the elevated tank shall be treated water and will be made available by the Employer at the new Regional water treatment works site situated north of the Phongolo River.

The Employer will provide to the Contractor, at no cost, a quantity of water equivalent to three times the aggregate volume of the pipelines and tank (refer Clause PSL 7.3). All water drawn from the Employer's system, in excess of the "free issue" volume will be charged at the Employer's bulk rate per kilolitre that is charged to their bulk consumers. Tenderers are to note that an allowance should be made for the purchase of additional water for scouring of the pipeline.

The Contractor will be required to supply, install, operate and maintain at his cost, such temporary conveyance systems, pipework, pumping, and storage facilities as may be necessary to ensure sufficient supplies of water are available at all times throughout the works area and for the orderly control of supply and disposal of used water.

C3.4.5.1.3 Electricity

The Contractor shall make his own arrangements concerning the supply of power. Refer to C3.4.5.2.7.

C3.4.5.2 Facilities provided by the Contractor

C3.4.5.2.1 Site Establishment

Possible sites for establishment will be indicated at the pre-tender site visit. The Contractor shall determine his space requirements and shall be responsible to negotiate permission and terms of use of the site(s) in agreement with the respective land owner(s). The Contractor must not cut down or damage any trees nor make any excavation without the written permission of the Employer's Agent and will be required to restore the site to its original condition on completion of the works.

The Contractor shall provide and maintain at his own cost all sheds and housing necessary for the convenience of his workmen and for the accommodation and proper protection of his erection or other equipment from damage or loss. These are to be erected only on sites which shall have been approved by the Employer's Agent and they shall be removed as soon as they are no longer required for the works; and the site thereof restored to its original condition and the ground left clean and sanitary.

The Contractor shall provide the necessary ablution facilities at his camp site and the site of the works for the use of his employees. Separate toilet facilities shall be available for the sole use of the Employer's Agent or his representative(s). Buildings and fencing are to be neat and presentable and the surrounding areas must at all times be kept in a neat, clean and orderly condition. All buildings and latrines shall be in accordance with the Local and National Health Regulations and shall be kept in a clean, sanitary condition.

The Contractor shall provide security watchmen adequate to safeguard the works, plant, personnel and materials for the contract as he deems fit at no extra cost for the Employer. The Contractor must ensure that all his employees as well as the employees of his subcontractors are able to identify themselves as members of the construction team.

The Contractor shall pay special attention to the management and disposal of all water on site from whatever source. It is essential that all completed works or parts thereof are kept dry and properly drained. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

The Contractor shall dispose of solid waste by burying at approved site(s). Buried waste shall be covered up on a daily basis and the Contractor shall rehabilitate the site prior to practical completion. The Contractor shall dispose and cover up all surplus and unsuitable material in legal spoil areas of his own choice. He shall be responsible for all arrangements necessary to obtain access to such spoil sites.

The Contractor's Establishment shall not be considered as being complete until such time as the facilities to be provided for the Employer's Agent are fully in place. (Refer PSAA & PSAB)

C3.4.5.2.2 *Equipment for Determination of Labour-Intensive Excavation (Read with SANS 1921 - 5: 2004)*

The Contractor shall provide and maintain in good condition a Dynamic Cone Penetrometer (DCP) and all associated equipment for the determination of areas for Labour-Intensive excavation methods as per PSDB5.4 and for the classification of excavated materials as per Annex B of SANS1921 Part 5.

C3.4.5.2.3 *Accommodation of Employees (Read with SANS 1921 - 1: 2004 clause 4.14.)*

No housing is available for the Contractor's employees and the Contractor shall make his/her own arrangements to house his/her employees and to transport them to site.

No informal housing or accommodation on the site will be allowed.

C3.4.5.2.4 *Management of Pipe Yards* The steel pipe stock will be supplied by the Employer on 'free issue' basis from four existing pipe yards in the vicinity of the work area. The location of the pipe yards is shown in the Locality Plan. The Contractor shall be responsible for inspecting and uplifting the pipes for transport to the work site. Pipes indicated as defective shall be marked up at the point of defect and left for repair by the Employer. Once the pipe has been uplifted for transport the pipe becomes the responsibility of the Contractor and the remedying of any subsequent damage shall be for the Contractor's account.

The Contractor shall be responsible for the maintenance of the pipe yards and the access to each pipe yard, to the degree adequate to the Contractor's requirements for safe handling and transport of the pipes. This shall include access onto and around the site, drainage and control of vegetation and maintenance of perimeter fencing and firebreaks.

To lessen the risk of fire damage the whole site should be cleared and kept clear of bushes and shrubs, subject to the Environmental Specification and Environmental Management Plan. The grass on the whole site is to be cut to a height of no more than 25 mm and maintained at a height not exceeding 50 mm.

When steel pipes are moved for any reason steel pipes must be stored off the ground and secured from rolling using suitable dunnage, such as sandbags. The steel pipes may not be stacked. An average space of 400 mm should be allowed between parallel pipes, the end to end gap between pipe stacks should be 5 m and the gap between pipes and the perimeter fence should be at least 6 m which includes the 5 m wide firebreak.

C3.4.5.2.5 Storage and laboratory facilities

No storage facilities will be available or provided by the Employer. The Contractor is responsible to make suitable arrangements to deliver materials as and when required for erection purposes and when called for by the Employer's Agent, whether such call be issued on or after the delivery date offered by the Tenderer.

C3.4.5.2.6 Water

With the exception of the Jozini Town WTW there is presently no potable water supply in the immediate project area. The Contractor shall make his own arrangements for the supply of potable water for human consumption by the workforce, for pressure testing and disinfecting of pipelines, for water-tightness testing and disinfection of the elevated tank and for other constructional uses. Refer to sub-section C3.4.5.1.2 'Water Supply'.

Where the Contractor wishes to make use of potable water supply (Jozini Town WTW) the Contractor's responsibility shall include to provide a suitable connection, if so approved, including a suitable flow meter. This connection shall be capped or removed to the satisfaction of the Employer's Agent upon completion of the construction works. All costs in regard to supply of water shall be deemed to be included in the rates for the establishment and dis-establishment of the site facilities. The Contractor will be required to supply, install, operate and maintain at his cost, such temporary pipework and storage facilities as may be necessary to ensure sufficient supply.

The Contractor will also be required to pay all connection fees and for the cost of all water drawn from the water supply authority's system at the ruling tariffs and his tender will be held to include for all such requirements throughout the duration of the Contract.

Water for human consumption shall be required to conform to SABS 241 for potable water. The Contractor shall be responsible for his arrangements for supply and treatment of water to required quality standards and to demonstrate the acceptable quality of the water by means of an analysis certificate from an accredited laboratory.

C3.4.5.2.7 Electricity

The Contractor shall make his own arrangements concerning the supply of power. The Contractor will be required to pay all the requisite connection and consumption charges for whatever temporary power supplies he may require for his use on the site. No direct payment will be made for the provision of power. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which this service is required, or in the Contractor's preliminary and general items as the case may be.

C3.4.5.2.8 Telecommunication services

The Contractor is to provide his own telephone facilities on site. No telephone will be required for the use of the Employer's Agent or his representative. An item has been included in the Bill of Quantities to cover the costs of the Employer's Agent Representative cellular phone calls for the duration of the Contract.

C3.4.5.2.9 Vehicles and equipment

No vehicles will be required for use by the Employer or his Representative.

C3.4.6 Permits and way leaves

The Employer will obtain the necessary approvals and the Contractor will be required to comply with the authorities and landowners' / occupiers' requirements at all times.

The Contractor will be required to take cognisance of, and comply with, the general wayleave and 'permission to occupy' requirements of the authorities and land owners / occupiers during the construction of the works. Specific wayleave requirements are listed immediately following this section.

The Contractor will be required to confirm that permission has been granted and that the occupiers and all affected parties have been informed of the Contractor's intentions before commencing work on each property.

C3.4.6.1 Eskom's Wayleave Conditions

Eskom has prescribed the following conditions:

"No excavation may be carried out within a 10m radius of the foot of any Eskom structure measured from the inner edge of trench. Where civil work is done outside of this radius the soil must be suitably sloped and protected so as not to cause erosion in or onto the 10m radius of undisturbed soil.

Operators of vehicles and machinery must be made aware of danger of working beneath power lines.

No explosives may be used within 500m of Eskom structures without prior consent (with 14 working days notice required).

No exposure of foundations of Eskom structures is permitted.

Clearances from live conductors must be maintained as per Regulation 15 of the Electrical Machinery Regulations (OHS Act No. 85 of 1993)

No dumping of rubble, earth etc is allowed within the Eskom servitude area.

Changes in ground level may not infringe statutory clearances to conductors.

After any change in ground level, the surface to be rehabilitated and stabilized to Eskom's satisfaction."

C3.4.6.2 Designated Working Strip and other Working Areas

The working strip width as stated in C3 or as shown on drawings shall apply to this contract. The Contractor is alerted to the fact that certain landowner, statutory and utility owner permissions that apply to the contract apply solely within the working strip and other designated working areas and that carrying out work or using a travelling way outside of these designated areas without prior permission may result in delay and/or financial and other sanctions that may not constitute valid grounds for claim for disruption, delay and financial complication.

The Contractor shall therefore be required to obtain the permission of the Employer's Agent in writing before establishing stockpiles, set-down and storage areas, carrying out temporary or permanent works and for travelling/transportation other than on formal roads.

Measurements for payment for site clearance, rehabilitation and all other activities shall apply solely to areas within the working strip and other designated working areas unless expressly provided for in writing.

C3.4.7 Alterations, Additions, Extensions and Modifications to Existing Works

The Contractor must satisfy himself that the layout of the existing structures and plant is compatible with the proposed works, and must advise the Employer's Agent of any conflicts.

Alterations to existing services will require prior written authorisation by the Client.

C3.4.8 Water for construction purposes

The Contractor shall make his own arrangements regarding water for construction purposes and shall be responsible to provide suitable transport as well as abstraction arrangements.

C3.4.9 Survey control and setting out of the works

The Contractor will be responsible for the setting out of the works.

Survey Beacons (Read with SANS 1921 - 1: 2004 clause 4.15)

The Contractor shall take special precautions to protect all permanent survey beacons or pegs such as bench-marks, stand boundary pegs and trigonometrical beacons, regardless whether such beacons or pegs were placed before or during the execution of the Contract. If any such beacons or pegs are disturbed by the Contractor or his/her employees, the Contractor shall have them replaced by a registered land surveyor at his/her own cost.

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C3.5: MANAGEMENT

C3.5 MANAGEMENT**C3.5.1** *Management of the works***C3.5.1.1** Applicable SANS 1921 Specifications

The following SANS 1921 Construction and Management requirements for works standards and associated specification data are applicable:

SANS 1921-1	General engineering and construction works
SANS 1921-2	Accommodation of Traffic on Public Roads
SANS 1921-6	HIV/AIDS Awareness

C3.5.1.2 Particular and Generic Specifications

The applicable Particular Specifications and Generic Specifications are included in section C3.8 of this specification.

C3.5.1.3 Specification Data

The specification data applicable to these SANS 1921 standards is as follows:

Standard	Clause	Essential Data
SANS 1921-1	4.1.7	The requirements for drawings, information and calculations for which the Contractor is to be responsible are detailed in the project specifications.
	4.2.1	The responsibility strategy assigned to the Contractor for the works is A.
	4.2.2	The Structural Engineer for the works is SDM Consulting Engineers and Project Managers (Pty) Ltd.

	4.3.1	The planning, programme and method statements are to comply with the following: 1) The programme shall be prepared in bar (Gantt) chart form, preferably using a project management software tool such as <i>Microsoft Project</i> and shall be issued to the Employer's Agent in both hard copy and electronic format. The programme shall be structured to cover all items of work including all work to be done by sub-contractors and shall clearly indicate the critical path 2) The programme must clearly show the milestone dates to be achieved taking the indicative construction sequences into account. 3) The programme shall be updated whenever the circumstances of the work execution change and whenever instructed by the Employer's Agent. Each revision of the programme shall be marked with a sequential revision number. The Contractor's programme shall be subject to approval by the Employer's Agent. 4) Method statements shall be prepared by the Contractor for any procedures proposed by the Contractor for use in the contract as well as in accordance with the requirements of the project specifications.
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Standard	Clause	Essential Data
SANS 1921-1	4.4	The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Employer's Agent. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Contractor's QA system shall be open to audit by the Employer's Agent 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 QC&QA system. His attention is drawn to the fact that it is not the duty of the Employer's Agent or the Employer's Agent Representative to act as foreman or surveyor.
	4.5	The Contractor will be required to verify the accuracy of all survey control provided on the drawings or in the form of beacons previously placed on the site. Prior to setting out, the Contractor shall also check the invert levels of all existing tie-in channels, manholes, pipes etc. against those provided on drawings and immediately report any inconsistencies to the Employer's Agent in writing. The Contractor shall be held directly responsible for any errors in setting out of the works arising from use of the survey control or existing invert levels provided.

	4.5.1	It is important that, during construction, the Contractor checks all levels from time to time and satisfies himself as to their accuracy prior to placing of concrete as no concrete work will be accepted where tolerances have been exceeded, particularly where it interferes with the hydraulics of the flow through the works. The maintenance of gravelled temporary deviations and existing gravel roads used for construction shall include the watering of roads daily in the dry season for reduction of dust.
	4.6	An item has been included in the Schedule of Quantities to cover all work in dealing with water.
	4.12.2	The samples of materials, workmanship and finishes that the contractor is to provide and deliver to the Employer are: 1) Pipes and Jointing methods 2) Pipe coatings and corrosion protection of pipes and fittings 3) Repair and make-goods of pipe coatings and linings 4) Welding procedures 5) Proof of Welders' qualifications 6) Pipe bedding materials 7) Concrete aggregate 8) Concrete sand 9) Concrete mix designs 10) Reinforcing The fabrication drawings that the Contractor is to provide and deliver to the Employer are those for all fabricated fittings, specials and bends, the reservoir ladders and any prefabricated items that the Contractor proposes to use in the permanent works.

Standard	Clause	Essential Data
SANS 1921-1	4.14.3	The office accommodation, equipment, accommodation for site meetings and other facilities for use by the employer and his agents are as designated in SABS 1200 AB (refer PSAB). 1) Safety helmets, gumboots and other necessary safety equipment for the sole use of the employer and his agents 2) Survey equipment as per PSAB 4.2 3) No testing laboratory is required on site for use by the Employer's Agent
	4.14.5	Toilet facilities are required for the Employer and his agents.
	4.14.6	The requirements for the provision and erection of sign boards are:
		1) As per SABS 1200 AB and C4

SANS 1921-1	4.17.1	The requirements for the termination, diversion, or maintenance of existing services are: 1) Support in-situ of existing water mains up to and including DN 300 crossing pipe trench 2) Deviation of small diameter water house connection pipes and fittings. 3) Support in-situ of existing stormwater drain pipes up to and including DN 600 crossing pipe trench 4) Deviation and relocation of electrical power cables as domestic power connections – work is to be carried out by the responsible utility owner under the overall co-ordination of the Contractor. Provisional sums are provided for this purpose. 5) Temporary deviation and accommodation of traffic
	4.17.2	Where public services must be interrupted on account of the works, it shall be the Contractor's responsibility, in conjunction with the appropriate Authority to ensure that all users affected by the interruption are given due and sufficient notice of the date, time and duration of the interruption.
	4.17.3	Services which are known to exist on the site are: 1) Telephone line and electricity lines 2) Buried power cables 3) Water pipelines 4) Stormwater pipes and catchpits 5) Roads and tracks The approximate positions of some of the known underground services, which may be affected by the Works, have been shown on the drawings. The exact location or number or existence of these services cannot be guaranteed and the Contractor will be required to confirm the locations and status of all services with all service owners irrespective of whether they are shown on the drawing or not.
	4.17.5	If unknown services are found undamaged, they shall then be deemed to be known services with the provisions pertaining to known services becoming applicable.
Standard	Clause	Essential Data
	4.17.6	Where a service has been located and exposed, the Contractor shall take every care in ensuring that the excavation containing the service is barricaded and protected against collapse and that the service is adequately protected against damage. Should the existing service become damaged by the Contractor or any third party due to negligence on part of the Contractor, then the cost of its repair along with any consequential costs shall be borne by the Contractor.

as	4.17.7	Existing known services or services that have been proved by the Contractor, which are damaged by the Contractor, shall be repaired by the service provider and all costs of the repair shall be borne by the Contractor.
	4.18	The additional health and safety requirements of the Employer are as specified in the health and safety specification included in C3.8 of this document.
	4.18.2	The site office area, pipe yard, the servitude/working strip and all other construction zones shall be fenced off to prevent unauthorized entry to the site. Gates shall be provided by the Contractor as required for construction access purposes. The Contractor shall be held responsible for the control of access at these gates at all times as well as to the worksite during removal and re-erection of fencing. No other opening in the fence shall be permitted and the Contractor shall be responsible for monitoring the fencing on a daily basis and repairing any such opening within the same day that it is detected. Notices in two official languages (English and isiZulu) shall be attached to the fence where appropriate to indicate that the site is for personnel employed on the Contract only and that unauthorised entry is forbidden.
	4.22	The temporary fencing shall comprise 2m high Bonnox 4 x 4 Mesh fencing, Bonnox pattern 1972/4, with straining posts and straining wires as required and according to supplier's directions and with mesh spacing not exceeding 100mm in both the vertical and horizontal directions. Chevron tape shall be interwoven in a zig zag pattern from the top to the bottom of the fence thereby clearly marking off the working area. At weekends or holidays the site must be completely closed off to the public. It is the responsibility of the Contractor to ensure that the sites are closed off. Standard type farm gates can be used for access points and locked when the Contractor is not in attendance. All fencing and gates must be maintained until the work is complete and shall then be removed. In proximity to residential areas the Employer's Agent may specify the addition of plastic square mesh to the temporary fencing, or equivalent method, to acts as a childproof barrier to prevent child access to pipe trenches. The work to be undertaken by selected subcontractors comprises the supply and installation of cathodic protection devices and equipment, the environmental rehabilitation of the site and provision and installation of telemetry equipment.

Standard	Clause	Variations
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SANS 1921-1	4.1.10	Where reference is made to "SANS 2001", substitute with "SABS 1200"
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Standard	Clause	Additional Clauses
SANS 1921-1	4.4	The Contractor is required to set up and maintain a Quality Management system and Quality Assurance process. The requirements are detailed elsewhere in this document.
	4.5	The Contractor is required to submit Method Statements for specific items of work as identified in this specification and wherever the Contractor proposes his own approach or method of working. In order to avoid delays to work Method Statements must be submitted well in advance of the proposed work (at least 10 working days or such suitable time as agreed with the Employer's Agent Representative) and are subject to the approval of the Employer's Agent.
	4.6 (e)	The Contractor is to ensure that stormwater runoff or any groundwater seepage is controlled by means of temporary earthworks, cofferdams, pumping equipment, well-pointing, dewatering equipment etc. to keep the works free of water.
	4.6 (f)	Dealing with all water during construction from whatever source will include for by-pass arrangements for dealing with all possible flows whether or not the existing flow path is being interfered with during installation of pipework.
	4.7.4	No blasting will be permitted within 10 m of any structure, pipeline or service unless the Contractor can satisfy the Employer's Agent that his proposed blasting methods and controls are such that no damage will be caused to the adjoining structure, pipeline or service. The Contractor will be required to provide equipment for and take vibro-recordings at no additional cost to the Employer.
	4.8.1	The Contractor shall be responsible for protection from damage to any structures or services that might be affected by the excavations or works.
	4.8.2	Notwithstanding whatsoever special construction methods, equipment or materials are used by the Contractor to protect the structure or service from damage, all work will be measured for payment on the assumption that normal excavation had been carried out and the Contractor shall therefore make allowance for the additional costs in his tendered rates.
	4.9.5	The provision of security for the Contractor's site establishment, plant and personnel at all times is the sole responsibility of the Contractor and no claims for payment for additional security measures taken during the contract will be entertained.
	4.9.6	The Contractor is to comply with the Environmental Management Plan and Employer's Environmental Management Specification included as a Particular Specification in Section C3.8.

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	4.17.8	The Contractor shall confine his so carry out all his operations as not to encroach on, or interfere with, trespass on, or damage adjoining land, buildings, properties, road structures, pipelines, places and things, in the vicinity of the Works and outside of the site boundary.
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Standard	Clause	Essential Data
SANS 1921-2	4.3.2	The Contractor shall design all temporary culverts.
	4.10.1	The Contractor shall provide the following minimum traffic-control facilities: a) flagmen with traffic STOP and GO signs b) road signs, channelization devices and New Jersey type movable barriers c) all construction vehicles and plant used on the works must be equipped with rotating amber flashing lights and warning boards with the words CONSTRUCTION VEHICLE in 250 mm high red letters on a white background.

Standard	Clause	Variations
SANS 1921-2	4.3.2	Variations The Contractor shall be responsible for the design of all temporary deviations.

Standard	Clause	Essential Data
SANS 1921-5	4.2.1	The means of determination of method of Excavation (i.e. by hand or machine excavaton) shall be as per PSDB5.4.1.
		The depth of trenches which are to be excavated by hand is less than or equal to 1,5m and providing that the ground is stable.

Standard	Clause	Essential Data
SANS 1921-6	4.2.1 a)	A qualified service provider is one that appears on the list of recommended service providers, which is available from all regional offices of the Department of Public Works.
	4.2.1 a)	The HIV & AIDS awareness programme is to be repeated at 6 monthly intervals for the duration of the Contract (including the initial one at the start of the Contract).

Standard	Clause	Variations
SANS 1921-6	4.3.2	The HIV & AIDS Awareness Champion and the Employer's representative shall certify the report and schedule described in 4.3.1 whenever a claim for payment is issued to the Employer.

Standard	Clause	Additional Clauses
SANS 1921-6	4.1 f)	Appointing an HIV & AIDS Awareness Champion within 14 days of site handover from amongst the workers (which could include the Community Liaison Officer). The champion should be able to speak, read and write English, speak and understand the local languages spoken by the Workers and shall be on site at all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV & AIDS information, the support services available and has the necessary skills to handle questions regarding the HIV & AIDS programme in a sensitive and confidential manner. The Awareness Champion shall be responsible for: • Liaising with the Service Provider to assist in organising awareness workshops • Filling condom dispensers and monitoring condom distribution • Handing out information booklets • Placing and maintaining posters
	4.1 g)	Provide information about the names of the closest service providers to be displayed on a poster of size not smaller than A2.
	4.2.3 c)	Understand and communicate the purpose of voluntary HIV & AIDS testing and counselling.
	4.2.3 d)	Recognise the importance of caring for people living with HIV & AIDS and be familiar with the various treatments available, including treatment of opportunistic infections.
	4.2.3 e)	Understand and communicate the rights and responsibilities of those living with HIV & AIDS in the workplace and the importance of nondiscrimination.
	5	Sanctions In the event that the Contractor fails to satisfy the requirements of this specification, the Employer may apply sanctions which include the rejection of claims for payment as being incomplete or the withholding of completion certificates (interim or final).

C3.5.2.1 Preliminary Programme

The Tenderer 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.

In drawing up his programme, the tenderer is to take into account the following:

The Contractor shall allow time for co-ordination of piping tie-ins to the existing system.

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 nonworking days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

C3.5.2.2 Construction Programme (GCC Clause 5.6)

For the purpose of this clause, "construction programme" means the Programme of the Works to be submitted in terms of Clause 5.6 of the Conditions of Contract and used to plan and organise the work. In terms of the GCC the accepted programme is a key resource for effective decision making in the contract regarding rights and responsibilities and the basis of adjudication of claims. Due to the contractual role fulfilled by the accepted programme, failure by the Contractor to submit a suitable programme, to pursue approval and to keep the programme up to date may prejudice the Contractor's prospects of defending his obligations or enforcing his rights under the contract.

On award of the Contract, the successful Contractor is to prepare a detailed construction programme covering the duration of the project. The programme is to show the dates by which access, permissions and information from other parties is required and should show all activities (including temporary and permanent works) the inter-dependencies between activities and must highlight which are critical path activities. With reference to Clause 5.6.1 the Initial Programme must be provided prior to commencement of the works. Adjusted programmes of works may be required from time to time as stated in Clause 5.6.1.

In addition to the Construction programme, when directed, the Contractor shall promptly furnish a detailed sub-programme of the construction programme for particular sections of the Permanent Works.

C3.5.2.3 Software Application for Programming

The construction programme shall be prepared using Excel Format (*.xls/.xlsx) or MS Projects Format (*.mpp) and showing at least the minimum detail as described in Clause 5.6.2 of the General Conditions of Contract 2015.

C3.5.3 *Sequence of the works*

The Contractor can choose his own sequence of construction, bearing in mind the availability of water for the pressure testing of pipelines and the water-tightness testing of the elevated tank.

The Contractor must practice progressive reinstatement and remediation in line with the Particular Specification for Environmental Management and EMP. Finishing and tidying must not be deferred to the end of the Contract. All finishing and tidying shall be carried out to the best advantage of the project as a whole, and in close co-operation with other parties and residents.

On no account will spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily impede the activities of others or impact on

the environment. In the event of this occurring, the Employer shall have the right to withhold payment for as long as may be necessary in respect of the relevant Works in the areas concerned without prejudicing the rights of others to institute claims against the Contractor on the grounds of unnecessary obstruction.

C3.5.4 *Community Liaison Officer*

The Employer will identify a person to be employed by the Contractor as Community Liaison Officer (CLO) for the duration of the Contract. The CLO shall be employed on a full day basis, for the duration of the contract and shall be paid at a rate of 100% of the Civil Engineering Industry minimum wage rate. In addition, all statutory conditions of employment in respect of UIF, Workmen's Compensation etc. shall be met. An amount is provided in the BoQ for the remuneration of the CLO by the Contractor.

The CLO will be required to work under the direction of the Client's ISD officer.

The primary role of the CLO will be liaison and facilitation of communication which shall include *inter alia*:

- Assist in all aspects related to the recruitment of local labour, and advise them of their rights
- Act as liaison between the Contractor and community on the application of Labour Intensive Construction Methods as set out in this document
- Act as a source of information for the community and the Ward Councilors on issues related to the Contract
- Liaise with a Project Committee, as anticipated in the EMP, for community representation
- Keep the Contractor advised on community issues
- Keep the Contractor advised on any issues pertaining to local security (where applicable)
- Assist in setting up any meetings/negotiations with affected parties
- Keep a diary and record details of labour/community issues that may arise
- Monitor and report on general Health and Safety issues on site
- Assist in HIV & AIDS awareness programmes
- Attend contract site meetings and report on labour/community issues

The CLO shall have no authority to issue any instructions to the Contractor. The CLO shall be neutral to all parties and endeavour to remain impartial should any conflict arise.

Responsibility for identifying a pool of suitable labour shall rest with the CLO, although the Contractor shall have the right to choose from the pool. The Contractor (and subcontractors) shall have the right to determine the total number of labourers required at any one time, which may vary throughout the contract.

The Contractor shall have the right to replace labour that is not performing adequately and the replacement of any labourer shall be done in conjunction with the CLO.

Local labour employed on the contract shall be paid in accordance with the local labour rate and all statutory conditions of employment shall be met.

C3.5.5 Methods & Procedures

C3.5.5.1 *Management & Disposal of Water (Read with SANS 1921 - 1: 2004 clause 4.6)*

The Contractor shall pay special attention to the management and disposal of water and stormwater on the site. It is essential that all completed works or parts thereof are kept dry and properly drained. Discharge of water onto landowner property or onto roads that may lead to nuisance or damage shall not be acceptable. Claims for delay and for repair of damage caused to the works as a result of the Contractor's failure to properly manage rain and surface water, will not be considered.

C3.5.5.2 *Disposal of Spoil or Surplus Material (Read with SANS 1921 - 1: 2004 clause 4.10)*

The Contractor will be responsible for the disposal of material and making all arrangements in connection therewith. The Contractor shall dispose of all surplus and unsuitable excavated material in designated spoil areas.

C3.5.5.3 *Length of Trenches not Backfilled and not Rehabilitated*

The recommended maximum length of open trenches at any one time is 500 m in order to limit the safety risk to surrounding communities.

In areas immediately adjoined by residential properties the Contractor will not be permitted to excavate any new pipe trenches once the maximum limit for open trench in a particular area has been reached, without the permission of the Environmental Control Officer. A maximum of three working fronts for pipelaying will be permitted.

C3.5.5.4 *Length of Pipeline not Pressure Tested*

The maximum length of pipeline which is not pressure tested that will be allowed at any given time during construction is 2000 m. The Contractor will not be permitted to excavate any new pipe trenches once the maximum limit for "un-pressure tested" pipeline has been reached unless otherwise authorised by the Employer's Agent.

C3.5.5.5 *Determination of Haul distances*

The Contractor shall be responsible to plan his work and logistics so as to minimise his costs of haul of imported materials and spoil. No payment will be made for overhaul on this contract unless provision is made for in specific items.

C3.5.6 Quality Plans and Control

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Employer's Agent. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Employer's Agent 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. Any shortcomings in the quality control process shall be rectified timeously and shall be a precondition for the further approval of the affected work.

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 Employer's Agent or the Employer's Agent representative to act as foreman or surveyor.

C3.5.7 Management of the Environment

(Read with SANS 1921-1: 2004 clause 4.19 and the Environment Particular Specification (PZ) and the applicable Environmental Management Programme (EMPr).

The maintenance in good condition of the environment on the site at all times to the extent reasonably possible and the rehabilitation of the site according to the EMPr is the responsibility of the Contractor and all activities in this regard shall be deemed to be included in the Contractor's rates with the exception of the activities covered by payment items in Clause PZ8 and those activities listed under the scope of the Environmental Rehabilitation specialist sub-contractor.

Nonetheless the overall responsibility to comply with the Environmental Specification and EMPr shall be that of the Contractor and nothing shall relieve him of this responsibility unless so stated explicitly in the contract or in authorised correspondence pursuant to the contract administration. The Contractor is alerted to the existence of statute law regulating the integrity of the environment, and that sanctions for non-compliance apply under statute law in addition to the sanctions contained in this contract.

The Contractor shall pay special attention to the following:

(a) Clearing of Vegetation

The Contractor shall not destroy, remove or clear trees, timber or shrub to any extent greater than that approved. The Contractor shall not carry out any activity outside the areas defined for clearing unless otherwise approved by the Environmental Control Officer. Organic matter removed may not be disposed of without a waste disposal licence.

(b) Soil Erosion

The quality of topsoil in stockpiles will be maintained by measures including contamination from other materials, minimizing stockpiling periods and prevention of soil erosion by surface runoff or wind. Monitoring for erosion and soil erosion risk will be undertaken regularly to ensure that any erosion that occurs is mitigated as soon as possible.

(c) Risk of Faunal Injury and Death

The trenches will be kept open for the minimum period necessary to undertake the works. Temporary fencing or barriers will be placed along the trenches in all populated areas and in areas that are likely to be used as crossing points along the corridor.

(d) Pollution Prevention

With particular regard to Sanitation, Solid Waste Facilities, Fuels, Hazardous Substances and other Liquid Pollutants as elaborated in the Particular Specification for Environmental Management.

(e) Rehabilitation

The contract provides for the final environmental rehabilitation to be performed by a specialist sub-contractor to the main Contractor, according to a defined scope and the cost thereof is provided for in a provisional sum. The Contractor is alerted however to the contractual requirement for progressive reinstatement throughout the course of the contract and the main Contractor shall bear the overall and final responsibility to ensure that the site and its surrounds are rehabilitated to the condition in which they were prior to commencement of construction activities and in accordance with the EMPr attached hereto.

(f) Working in watercourses

Working in watercourses is strictly controlled by the Environmental Specification and EMPr and sanctions apply to non-conformances. Cofferdams shall be constructed around trenched areas in watercourses using sealed plastic bags filled with sand and means of conveyance must be provided for the flow of water to bypass the excavation. The flow of rivers is not to be restricted.

C3.5.8 Accommodation of Traffic on public roads occupied by the Contractor (Read with SANS 1921 – 1: 2004 clause 4.13 and SANS 1921 – 2: 2004)

C3.5.8.1 General

The Contractor will be responsible for the safe and easy passage of public traffic past and on sections of roads of which he has occupation or where work has to be done near traffic.

Accommodation of traffic, where applicable shall comply with SANS 1921-2: 2004: Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor. The Contractor shall obtain this specification from Standards South Africa if accommodation of traffic will be involved on any part of the construction works.

C3.5.8.2 Basic Requirements

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.

The Contractor shall ensure that all road signs, barricades, delineators, flagmen and speed controls are effective and that courtesy is extended to the public at all times.

Failure to maintain road signs, warning signs or flicker lights, etc, in a good condition shall constitute ample reason for the Employer's Agent to suspend the work until the road signs, etc, have been repaired to his satisfaction.

The Contractor may not commence constructional activities affecting existing roads 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.

The Contractor shall design, construct and maintain all temporary access and haul roads to the various working areas. The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations.

The Contractor shall provide and grant access to persons whose properties fall within or adjoin the area in which he is working.

C3.5.8.3 Traffic Safety Officer

Where warranted by traffic conditions on or near the site, the Contractor shall nominate a suitable member of his staff as traffic safety officer to be responsible for the arrangement and maintenance of all the measures for the accommodation of traffic for the duration of the project. Duties of the traffic safety officer shall be as set out in SANS 1921 Part 2 and shall also be in compliance with the Occupational Health and Safety Act No 85 of 1993 and the Construction Regulations 2003, including the Particular Safety Specification.

C3.5.9 Other Contractors on Site

The Employer may permit other contractors employed on its other projects to draw pipe stock from the pipe yards in use under this contract. The Contractor shall accord such other contractors opportunity at reasonable times, during working hours, and following notice of not less than two working days, to access the pipe yards for the purpose of uplifting pipes. The Contractor shall record such activities by others and shall obtain signatures against any materials withdrawn or damages or loss caused to the Employer's or Contractor's property.

Any damages or loss alleged to have been caused by activities by other parties so authorised on the site shall not be recognised unless the Employer's Agent is notified timeously and with supporting documentary or photographic evidence.

C3.5.10 Accredited Skills Training

Apart from the Contractor's own in-task training of his workforce it is the intention of the Employer that Accredited Skills Training will also be provided under this contract. The training may be conducted on site or at a remote training venue, at the Employer's discretion. The Employer may elect to specify on-site training. Therefore the Contractor will be required to provide office space and associated water and sanitation facilities for training as well as construction materials for practical training.

The Employer will notify the Contractor in writing of the name and details of an Accredited Skills Training Facilitator to be appointed by the Contractor. The Training Facilitator will conduct the training, which will take place adjacent to the worksite in a suitable area to be provided by the Contractor for the purpose of training and set aside for that purpose.

It is intended that Skills Training will be provided in any or all of the following disciplines:

- Trench Excavation and Supervision;
- Pipelaying;
- Steel Fixing;
- Formwork and Concreting;
- Basic Construction Hand;
- Bricklaying and block laying;
- Finishing Hand;
- Task Based Labour Administration
- Understanding the Scope of Works and Specifications;
- Labour Recruitment and Management;
- Contractor's Responsibilities and Requirements;
- Payroll Management and Implementation;
- Basic Tender and Contract Pricing
- Community Liaison and Facilitation

Candidates for Skills Training will be identified from individuals who have a minimum schooling level of Grade 10, preferably Grade 12. Training may also be identified for those that are undergoing, or who have undergone, training at a University of Technology or FET College.

The Employer will notify the Contractor in writing of the names of candidates to be accepted for Accredited Skills Training. The Contractor shall employ such candidates according to his full and normal conditions of employment for unskilled labour for the duration of training.

Upon completion of the training the employment of the trainees shall terminate and the Contractor shall not be obliged to keep the trained personnel in his employ. However he may re-employ candidates on an individual basis by mutual agreement.

The Contractor shall also pay the fees and charges of the accredited trainer according to the agreed scale.

The Accredited On-Site Skills Training is further described in Particular Specification PT. The cost of Accredited On-Site Training is an item in the Bill of Quantities and the cost is to be reclaimed by the Contractor via the Payment Certificates. The item shall be deemed to cover all the Contractor's costs in relation to provision of training as outlined in this section and in Particular Specification PT

C3.5.11 Testing, Completion, Commissioning and Correction of Defects

C3.5.11.1 Process control

The Contractor shall arrange for all tests required for process control to be done by a laboratory acceptable to and approved by the Employer's Agent.

The Contractor may establish his own laboratory on site or he may employ the services of an independent commercial laboratory. Whatever method is used, the Contractor must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Employer's Agent. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

C3.5.11.2 Acceptance control

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Employer's Agent for acceptance control. However, before accepting any work, the Employer's Agent may have further control tests carried out by a laboratory of his choice. The cost of such additional tests will be paid for in the contract, but tests that failed to confirm compliance with the specifications, will be for the account of the Contractor.

C3.5.12 Recording of weather

The Contractor shall be permitted to take his own rainfall measurements on site subject to the Employer's Agent approval, but access to the measuring gauge(s) shall be under the Employer's Agent's control. The Contractor is to provide and install all the necessary equipment for accurately measuring the rainfall as well as to provide, erect and maintain a security fence plus gate, padlock and keys at each measuring station, all at his own cost.

C3.5.13 Key Personnel

The Contractor's Key Personnel for this contract shall be the Contracts Director, Construction Manager, Contracts Site Agent, Health & Safety Officer.

C3.5.14 Management meetings

The Contractor and such other persons as may be nominated by the Employer's Agent shall be required to attend periodic site meetings, the date and place for which will be set by the Employer's Agent in consultation with the Employer and Contractor.

The main purpose of the site meetings will be to review and discuss progress and programme, and all persons attending the site meetings must be empowered to act on behalf of the organisations they represent.

C3.5.15 Forms for Correct Administration**C3.5.15.1 *Report on Employment Generation***

The Contractor shall provide to the Employer's Agent, monthly, in a form approved by the Employer, a detailed breakdown of his personnel days worked, and those of any Subcontractors currently employed at the Site to conform with EPWP reporting requirements.

The breakdown shall also include details of the following:

- employee name and ID number
- gender and age group
- job category, with skill classification, or speciality;
- job title;
- number of employees in each job category or with that job title;
- trainees in each job category;
- classification of employees by origin (local/imported)

C3.5.16 Electronic Payments

Payment of employees by electronic funds transfer will be permitted provided that the bank or financial institution that is proposed for the transfer of funds is adequately represented in Jozini, including the provision of ATM facilities.

C3.5.17 Daily Records

The Contractor is to provide a triplicate site diary book, which is to be kept on site, for the purpose of keeping daily records in respect of work performed on the site and all significant events. The Employer's Agent Representative will keep the top copy on his records and the Contractor will take the middle copy and the third copy will remain in the site diary book which will be kept on site for the duration of the Contract.

C3.5.18 Bonds and Guarantees

Requirements for a Performance Bond are indicated in section T.2. The original bond document will be retained by the Employer and will be released in accordance with Clause 6.2 of GCC 2015.

C3.5.19 Payment Certificates

The Contractor shall submit invoices at monthly intervals in terms of Clause 6.10.1 of GCC2015 in respect of works completed during the preceding period and materials on site. The work shall be measured according to the format of the BoQ and measurements should be taken together with the Employer's Agent Representative and are subject to agreement as to the status of work completed. The Contractor will submit his invoice, together with invoices and other supporting documentation to the Employer's Agent in terms of Clause 6.10.2. The Employer's Agent will process the Contractor's invoice within 7 days of receipt (refer Clauses 6.10.3 & 6.10.4 of GCC) to produce a Payment Certificate and will deliver this to the Employer.

The Payment Certificate will be scrutinised by the Employer prior to payment within 28 days of receipt of the Certificate from the Employer's Agent, provided that the date of submission is such as to comply with the Employer's payment cycle as notified to the Contractor. The Contractor must ensure that, allowing for the time allowed for processing Certificates by the Employer's Agent, his invoice is submitted in good time to allow for the payment cycle to be met.

The Contractor's tendered rates for the relevant items in the Bill of Quantities shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered.

C3.5.20 Permits The Employer requires no special permits for the Contractor's personnel other than those required by the statutory authorities. This includes, but is not necessarily limited to, Work and Residence permits for non-South African nationals, Blasting Certificate for the use of explosives and permits from the Department of Energy and Mineral Affairs in respect of mining and exploitation of natural resources including sand and aggregates.

C3.5.21 Proof of Compliance with the Law

The Contractor is referred to the Returnable Schedules in Section T.2. The Contractor shall be required to maintain evidence of the continued validity of all aspects to which he has witnessed compliance at the time of submission of his tender, as well as any permits required by nature of his operation. The Contractor will be deemed to have granted the Employer the right of inspection of such documentation in the possession of the Contractor at any time as well as to make his own independent investigations where necessary.

C3.5.22 Insurance Provided by the Employer

The Employer is not providing Principal Controlled Insurance for the works that are the subject of this contract.

C3.5.23 *Health and safety***C3.5.23.1 Health and safety requirements and procedures****C3.5.23.1.1 *General statement***

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 2014 issued on 07 February 2014 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 by executing the Agreement form C1.5 included in Section C1: Agreements and Contract Data.

C3.5.23.1.2 Health and Safety Specifications and Plans to be submitted at tender stage

(a) Employer's Health and Safety Specification

The Employer's Health and Safety Specification is included in this document as part of the Particular Specifications.

Contractors are to take note of the aspects identified in the specification requiring attention in the pricing of the tender and in the preparation of the H&S Plan:

(b) Contractor's Health and Safety Plan

The successful Tenderer shall, on receipt of notification that he has been awarded the contract, submit without delay his own documented Health and Safety Plan for the execution of the work under the contract. His Health and Safety Plan must at least cover the following:

- (i) a proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 30;
- (ii) pro-active identification of potential hazards and unsafe working conditions;
- (iii) provision of a safe working environment and equipment;
- (iv) statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (Regulation 7);
- (v) monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 8 and other applicable regulations; and
- (vii) details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

The Contractor's Health and Safety Plan must take into account the residential nature of the surrounding area and particularly the presence of children.

The Contractor's Health and Safety Plan will be subject to approval by the Employer, or amendment if necessary, before commencement of construction work. The Contractor will not be allowed to commence work, or his work will be suspended if he had already commenced work, before he has obtained the Employer's written approval of his Health and Safety Plan.

Time lost due to delayed commencement or suspension of the work as a result of the Contractor's failure to obtain approval for his safety plan, shall not be used as a reason to claim for extension of time or standing time and related costs.

C3.5.23.1.3 Cost of compliance with the OHSA Construction Regulations

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.

Items that may qualify for remuneration will be specified in the Safety Specifications included or in the Project specifications.

C3.5.23.2 Protection of the Public

The Contractor is alerted to the fact that the construction site traverses commercial and residential communities. The Contractor in all his planning is to take account of the potential hazard to residents, particularly children and is to take every precaution to avoid injury.

The site office area, pipe yards, the working strip and all other construction zones shall be fenced off to prevent unauthorized entry to the site. Gates shall be provided by the Contractor as required for construction access purposes. The Contractor shall be held responsible for the control of access at these gates at all times as well as to the worksite during removal and re-erection of fencing.

In populated areas and where directed by the Employer's Agent the Contractor shall also supply, install and maintain temporary fencing on both sides of the working area (servitude) and around the perimeter of all agreed additional working areas during construction for prevention of unauthorised access and shall remove on completion of the works.

C3.5.23.3 Barricades and Lighting

Requirements for barricading and lighting are stated Clause 4.18.2 of the Contract Data (section C3.5.1.3, to be read in accordance with in SANS 1921-1 Clause 4.18.2) as well as under the applicable Standard Specifications for each construction activity as modified in the Project Specifications (section C3.7).

C3.5.24 Aids awareness

C3.5.24.1 *Service Provider*

The Contractor shall engage a qualified service provider (i.e. one that appears on the list of recommended service providers, which is available from all regional offices of the Department of Public Works) to conduct an HIV & AIDS Awareness programme.

The HIV & AIDS awareness programme is to be repeated at 6 monthly intervals for the duration of the Contract (including the initial one at the start of the Contract).

C3.5.24.2 *Sanctions*

In the event that the contractor fails to satisfy the requirements of this specification, the employer may apply sanctions which include the rejection of claims for payment as being incomplete or the withholding of completion certificates (interim or final).

C3.6: STANDARD SPECIFICATIONS

C3.6 STANDARD SPECIFICATIONS**C3.6.1 *Introduction***

The Standard Specification gives a general description of the requirements to be met, and sets out the relevant specifications relevant to the Contract as well as other relevant and additional clauses. In certain clauses the standard specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternative or additional requirements applicable to this contract are contained in the project specifications.

C3.6.2 *General*

All materials, and components used in the manufacture and fabrication of plant to be supplied under this Contract, shall be the best quality and suitable for the purposes for which they are intended.

C3.6.3 *Quality Management***C3.6.3.1 Applicable Quality Assurance Standards**

The Tenderer shall provide a co-ordinated and formally documented statement of his quality management system, including quality management objectives, policies, organisation and procedures, for the compulsory implementation of SABS 0157 Code of Practice for Quality Management Systems, Part III. The same applies to Part II of the said Code of Practice which must be implemented on certain selected items only. However, although Part II will not be implemented in all instances it will not exempt the Contractor of compliance with the quality requirements laid down in the tender documents. Monitoring and control by the Employer's Agent may be done at any time on any material.

The Contractor shall submit with his tender an assessment report on his quality management and quality control system issued by an independent Quality Assurance Authority approved by the Employer's Agent. The inspection on which this assessment report is based shall have taken place not more than 12 months prior to the closing date for this tender.

Responsibility for and all associated costs of compliance with this sub-clause shall rest with the Contractor.

C3.6.3.2 Quality Assurance Enhancement

Should the Contractor or any of the proposed sub-contractors not comply with Sub-Clause C3.6.3.1 at the time of tender, a Contract may be awarded subject to a written undertaking to enhance his own and/or Sub-Contractor's quality assurance system to the satisfaction of the Employer's Agent before commencement of the contract.

C3.6.3.3 Quality Assurance Staff

The Contractor shall satisfy the Employer's Agent that a quality specialist together with sufficient and suitably qualified staff will be assigned to control the quality of the material used by each subcontractor engaged in the supply of critical and major components and sub-assemblies.

C3.6.3.4 Employer's Agent Quality Assurance Representative/Inspector

The Employer's Agent may elect to appoint an independent quality assurance representative to act in a surveillance capacity on his behalf for part or all of the contract.

The Employer's Agent's Quality Assurance Representative will be a selected Sub-Contractor and will be paid by the Contractor under this Contract for all tests passed by the Inspector and certified by the Employer's Agent. The Inspector will not act as the quality controller for the Contractor or his Sub-Contractors and accordingly any tests failing inspection will be for the account of the Contractor. Similarly the costs of all inspections arising following any failed tests will be for the account of the Contractor.

C3.6.3.5 Classification of Material

Part II of the above-mentioned Code of Practice, i.e. a quality system for manufacture and installation, will apply only to certain critical material, products and services if and where indicated hereunder in this document.

C3.6.3.6 Sub-Letting

All enquiries made and contracts placed by the Contractor for critical components shall require that sub-contractors comply with the requirements of the preceding sub-clauses. Responsibility for and all associated costs of compliance shall rest with the Contractor. In instances where SABS 0157 is not applicable, Tenderers must indicate what equivalent alternative Code of Practice is being implemented.

C3.6.3.7 Disqualification

Tenderers who do not include the formally documented statements called for in Sub-Clause C3.6.2.1 and who do not respond in terms of Sub-Clause C3.6.2.2 above may be disqualified.

C3.6.4 *Standard Specifications*

C3.6.4.1 Standardised Specifications

Standardised Specifications

The following standard specifications shall apply:

A	1986	-	GENERAL
AB	1986	-	ENGINEER'S OFFICE
C	1982	-	SITE CLEARANCE
D	1988	-	EARTHWORKS
DB	1989	-	EARTHWORKS (Pipe Trenches)
DK	1996	-	GABIONS and PITCHING
DM	1981	-	EARTHWORKS (Roads, Subgrade)
GA	1982	-	CONCRETE (Small Works)
HA	1990	-	STRUCTURAL STEELWORK (Sundry Items)
HC	1988	-	CORROSION PROTECTION OF STRUCTURAL STEELWORK
L	1983	-	MEDIUM PRESSURE PIPELINES
LB	1983	-	BEDDING (Pipes)
M	1996	-	ROADS (General)
MF	1981	-	BASE

(Note 1 - "SABS" has been changed to "SANS, without change to the contents of the specifications).

(Note 1 - "SABS" has been changed to "SANS, without change to the contents of the specifications).

Preface on Interim Situation until Full Suite of SANS Series Specifications are Available

The Bill of Quantities is based on the SABS 1200 system of specifications and measurement.

Where SANS specifications are available, these have been incorporated into the “Contract” section of this document.

Where overlapping specifications from the SANS 2001 series of specifications occur the appropriate SABS 1200 specifications have been incorporated into the Project Specifications.

In such cases, the requirements of the SABS 1200 specifications shall prevail over the requirements of the SANS specification(s).

The payment clauses in the Bill of Quantities are based on the SABS 1200 series of specifications for consistency and the Tenderer is required to ensure that he has priced all of the requirements pertaining to the SABS specifications.

The variations and additions to the standardised specifications (Project Specifications) as well as the Particular Specifications are included as C3.7 and C3.8 respectively. The variations, are prefixed PS, and take precedence over the SABS Standardised Specification.

Where the particular specifications are in conflict with either the variations and additions to standardized specifications or the SABS Standardised Specifications, the particular specifications shall take precedence.

The following SANS specifications are also referred to in this document and the Contractor is advised to obtain them from Standards South Africa (a division of SABS) in Pretoria.

SANS 10396: 2003:	Implementing Preferential Construction Procurement Policies using Targeted Procurement Procedures
SANS 1921-1 (2004):	Construction and Management Requirements for Works Contracts Part 1: General Engineering and Construction Works
SANS 1921-2 (2004):	Construction and Management Requirements for Works Contracts Part 2: Control of Traffic on Public Roads
SANS 1921-6 (2004):	Construction and Management Requirements for Works Contracts Part 6: HIV / AIDS Awareness

The standardised specifications (SABS 1200) must be read in conjunction with the new SANS 1921 family of standards. In case of any discrepancy or conflict between the two, the SABS 1200 specification shall take precedence and shall govern.

Refer also to the Preface on interim situation until full suite of SANS Series of Specifications is available, on the first page of the Project Specification.

The term “project specifications” appearing in any of the SABS 1200 standardised specifications is deemed to be equivalent to the term “scope of work” in SANS Specifications.

C3.6.4.2 Certification by recognised bodies

Wherever possible items and materials for construction of the works shall comply with the relevant South African Bureau of Standards Specifications and with the British Standards where these are applicable in the absence of local standards.

The Contractor, when using materials conforming to a Standard Specification shall if called upon furnish the Employer's Agent with certificates of tests showing that the materials do so conform.

C3.7: PROJECT SPECIFICATIONS

C3.7 PROJECT SPECIFICATIONS

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C3.7.1 PSA: GENERAL
(Applicable to SABS 1200 A – 1986)

PSA 3 MATERIALS

PSA 3.1 Quality and Samples

Add to the Sub-Clause:

No used or recycled material may be used in the Works unless expressly authorised by the Employer's Agent.

All materials to be provided under this Contract shall bear the mark of the South African Bureau of Standards wherever such materials are the subject of an SABS standard.

Materials bearing the SABS mark will not be subjected to tests to determine whether they comply with the relevant specifications. The Employer's Agent may in his discretion require any material not bearing such mark to be tested in accordance with the relevant specifications; should he do so the Contractor shall arrange for such tests to be carried out at the Contractor's cost by the South African Bureau of Standards or other approved body. Should the tests prove that any material complies with the Specifications, the Contractor will be reimbursed the value of the testing body's account for carrying out the tests required by the Employer's Agent.

Samples of concrete aggregates are to be delivered to an approved laboratory.

PSA 4 PLANT

PSA 4.1 Silencing of Plant

Delete the words:

" Machinery and Occupational Health and Safety Act 1983 (Act No 6 of 1983)"

And replace with:

"Occupational Health and Safety Act, 1993".

PSA 4.2 Contractor's Office, Stores & Services (Refer SANS 1921-1 Clause 4.14)

Add to the Sub-Clause:

Neither housing nor shelters are available for the Contractor's employees, and the Contractor shall make his own arrangements to house his employees and transport them to site.

The Employer will indicate possible areas for establishment of a site camp(s). It shall be the Contractor's responsibility to negotiate terms of use with the landowners and land users at the applicable site(s) to enable him to erect his site offices, workshops and storage facilities. The Contractor shall ensure that, in addition to his own requirements, 500 square meters of space is provided within his secured area for skills training purposes. The temporary facilities and ablution facilities shall comply with the requirements of the Local Authority.

On completion of the Works or as soon as the Contractor's facilities are no longer required the Contractor shall remove such facilities and clear away all surface indications of their presence. The site is to be rehabilitated as described elsewhere.

PSA 4.3 Suitability of Constructional Plant (New sub-Clause)

Add new Sub-Clause:

If the Employer's Agent considers that any constructional plant in use is in any way inefficient or is inadequate in capacity to complete the Works properly or on time, he shall have the right to call upon the Contractor to provide such additional plant or equipment as may be required to meet the needs of the works.

PSA 5 CONSTRUCTION

PSA 5.1.2 Preservation and Replacement of Beacons and Pegs subject to the Land Survey Act (Refer SANS 1921 - 1 Clause 4.15)

Add to the Sub-Clause :

The Employer's Agent will arrange for any pegs that are missing to be replaced at the Contractor's expense.

All survey reference marks shall be clearly marked and protected by the erection of three fencing standards.

All plot boundary pegs shall be painted and marked with fencing droppers.

PSA 5.4 Protection of Overhead and Underground Services (Refer SANS 1921-1 Clause 4.17)

Delete title and substitute the following :

Protection of Visible and Underground Services (Refer SANS 1921-1 Clause 4.17)

PSA 5.6 Pollution

Add to the Sub-Clause :

The Contractor shall take all reasonable measures to minimise any dust nuisance, noise, pollution of streams and inconvenience to or interference with the public or others arising out of the execution of the Works.

PSA 5.7 Safety (Refer SANS 1921-1 Clause 4.18)

Add to the Sub-Clause :

All work and particularly work carried out in the proximity of buildings, bridges, tanks or other structures shall be carried out in conformance with the regulations framed under the Occupational Health and Safety Act, 1993 and the Minerals Act, Act 50 of 1991, including shoring where necessary, to ensure the safety of structures that are at risk. This clause shall be read in conjunction with the Particular Specification for health and safety.

The Contractor shall enter into an agreement on Occupational Health and Safety as per the pro forma bound into this document.

The Contractor shall make available for the duration of the contract safety helmets, gumboots and any other necessary safety equipment for sole use by the Employer's Agent and his representative(s).

PSA 5.9 Protection of Structures (new sub-clause)

Where work is carried out in the proximity of buildings, bridges, buried services, tanks, wall or other structures, the Contractor shall take all necessary precautions required in terms of the regulations framed under the Occupational Health and Safety Act, (Act N° 85 of 1993) to ensure the safety of structures and services that are at risk.

PSA 5.10 Working Width (new sub-clause)

For the major part of its length, the working strip for the DN700 pipeline is deemed to be 20m and the working strip for the DN200 pipeline is deemed to be 10m.

The working width along the route of the pipeline is reduced to a width less than the deemed width in certain areas due to the proximity of buildings, other structures, road reserve restrictions, etc. Such restricted working areas have been designated as 'restricted width' and relevant items are included in the Bill of Quantities.

In all areas of restricted working width the Contractor shall take all additional precautions as necessary and as required in terms of the applicable regulations for the protection of adjacent structures, avoidance of intrusion into streams and other designated areas for protection, including shoring where necessary, and shall adopt such working methods as are necessary to achieve the completion of all the stages of the works, safely and without undue nuisance, within such reduced working width.

PSA 6 TOLERANCES**PSA 6.2 Degrees of Accuracy**

Add to the Sub-Clause :

Generally, Degree of Accuracy II shall be applicable to the whole of the Works, unless specified otherwise (refer specifically to PSD 6 and PSG 6).

PSA 7 TESTING

PSA 7.2 Approved Laboratories

Add to the Sub-Clause :

"The Contractor shall establish a testing laboratory equipped in such manner that it may be deemed by the Employer's Agent to be an approved laboratory. Alternatively, he may use the services of an established testing laboratory which the Employer's Agent has approved. The Employer's Agent shall be given free access to the testing laboratory."

PSA 8 MEASUREMENT AND PAYMENT**PSA 8.2.1 Fixed-Charge and Value-Related Items**

Add to the Sub-Clause :

The amount, if any, by which the sum of the fixed-charge and value-related items exceeds three percent of the net total tendered amount (excluding allowances for contingencies and price escalation) shall be regarded for payment purposes as time-related items and will be paid in accordance with Clause 8.2.2. (refer to Clause C2.1 (e) of the Pricing Instructions)

PSA 8.2.2 Time-related Items (refer to Clause C2.1 (e) of the Pricing Instructions)

Re-word the third and fourth lines to read:

"incremental amounts (calculated by the division of the remainder of the tendered sum by the number of remaining months of the duration of construction as assessed by the Employer's Agent) will be"

Add to the Sub-Clause :

Notwithstanding the provisions of Sub-Clause 8.2.2, an approved extension of time will not qualify the Contractor to receive any payment for that portion of fixed charge and value-related items which has become regarded as "time-related" items in terms of PSA 8.2.1 above.

PSA 8.2.2.2 Temporary Works – Dealing with Water on Works

Add to the Sub-Clause :

The sum in PSA 8.4.2.2 (h) shall cover the cost of providing, operating and maintaining the necessary equipment and other temporary works for dealing with groundwater in trenches and excavations.

C3.7.2 PSAB: ENGINEER'S OFFICE
(Applicable to SABS 1200 AB - 1986)

PSAB 2 INTERPRETATIONS

PSAB 2.1(b) Supporting Specifications

Delete the Sub-Clause and substitute the following :

SABS 1200 A

PSAB 2.3 Definitions

Delete the first two lines and substitute the following :

For the purposes of this specification the definitions given in SABS 1200 A shall apply:

PSAB 3 MATERIALS

PSAB 3.1 Nameboards

In the 3rd line delete "South African Institution of Civil Engineers" and substitute with "Consulting Engineers South Africa".

PSAB 3.2 Office Building(s)

Delete the first sentence and substitute the following:

Where required, the Contractor shall supply and furnish one air-conditioned 'Kwikjack' (6 m x 3 m) office for the sole use of the Employer's Agent and his staff. The office is to be erected at the Contractor's offices.

Add to the Sub-Clause :

In addition to the furnishings listed under sub-items (a) to (i), the following shall be provided and properly maintained :

- (j) electrical installation is to include a light and one 15A plug point plus an adequately sized air conditioning unit (for heating and cooling) for each room.
- (k) one refrigerator of at least 100 litre capacity
- (l) one kettle of at least 2 litre capacity
- (m) one tea set comprising six cups and saucers, six teaspoons, one teapot, one sugar bowl and one milk jug
- (n) covered parking for four vehicles
- (o) un-covered parking space for two vehicle
- (p) two "Barhold" or similar wall mounted racks each with 6 clamps suitable for hanging A0 sized drawings
- (q) one large meeting table
- (r) ten additional chairs

PSAB 4 PLANT**PSAB 4.1 Telephone**

The Contractor shall not be required to provide a telephone for the sole use of the Employer's Agent or his Representative.

PSAB 4.2 Survey Equipment (New Sub-Clause)

The Contractor shall provide the following survey equipment on the Site from the commencement to the completion of the Works :

- One 'Total Station'
- One automatic reading Engineer's level plus tripod
- One levelling staff (5 m long, 1 cm graduations)
- One staff angle bubble
- One metal change-point for levelling
- One separate plumb-bob
- One spirit level (one metre long)
- One hammer (2 kg) with steel or wooden pegs as necessary
- Two 50 m steel tape
- Three 5,0 m (or longer) retractable steel tape

The 'Total Station' may be shared by arrangement between the Contractor and the Employer's

Agent or his representative on Site. All other survey equipment shall be for the sole use of the

Employer's Agent Representative and his staff. The Contractor shall keep the equipment continuously insured against any loss, damage, or breakage and he shall indemnify the Employer's Agent and the Employer against any claims in this regard. Upon completion of the Works the survey equipment as listed above shall revert to the Contractor.

The Contractor shall maintain the equipment in good working order and keep it clean until the completion of the Works.

PSAB 4.3 COMPUTER EQUIPMENT

The Contractor shall provide a laptop computer, of approved manufacture and of standard acceptable to the Employer and pre-loaded with Windows 7 Pro 64, MS Office 2010, AutoCAD Map 3D 2012, 3G contract and A3 printer/fax/scan/copier; 12 megapixel digital camera and Garmin eTrex 20 navigation device and an A4 printer/scanner/copier, of approved manufacture and of standard acceptable for the sole use of the Employer's Agent (or his Representative) for the duration of the Contract.

The Contractor shall keep this equipment continuously and comprehensively insured and shall indemnify the Employer and the Employer's Agent against any claims in this regard.

The Contractor shall maintain this equipment in good working order until the completion of the Works, whereupon ownership of said hardware and software shall revert to the Employer.

PSAB 5 CONSTRUCTION

PSAB 5.2 Engineer's Office (Refer SANS 1921-1 Clause 4.14)

Add to the Sub-Clause:

The toilet facilities provided for the sole use of the Employer's Agent or his representative(s) shall include hand washing facilities and shall be maintained in a hygienic and sanitary condition and shall be removed on completion of the Works. The facilities provided shall conform to the local health authority's requirements as applicable and the Contractor shall pay all sanitary fees and charges.

PSAB 5.5 Survey Assistants

Delete the first sentence and substitute the following :

The Contractor shall make available to the Employer's Agent two suitably trained labourers for use on and about the site on survey and other work directed by the Employer's Agent at all reasonable times.

PSAB 5.6 Computer Equipment (New sub-clause)

Add new sub-clause:

The Contractor shall ensure that adequate supplies of consumables (paper and ink cartridges) are available on site at all times. The amounts paid by the Contractor will be recoverable from the Employer – a Provisional Sum has been included in the Bill of Quantities to cover these costs.

PSAB 8 MEASUREMENT AND PAYMENT**PSAB 8.1 Scheduled Items**

Delete the first sentence and substitute the following:

Items will be scheduled in terms of Sub-Clauses 8.3.2 & 8.4.2 of SABS1200 A.

PSAB 8.2.1 Fixed and Time-related Charges

Delete the first sentence and substitute the following:

The terms of Sub-Clause 8.4.2 of SABS 1200 A shall apply.

Add to the Sub-Clause:

The Tenderer is to include, under the Time-Related Charges, a Prime Cost Sum of R350,00 per week for a period of time equal to the Time for Completion of the Contract to cover the cost of the Employer's Agent telephone calls and internet access.

C3.7.3 PSC: SITE CLEARANCE

(Applicable to SABS 1200 C – 1980 As Amended 1982)

PSC 3 MATERIALS**PSC 3.1 Disposal of Material**

Add to the Sub-clause:

Material obtained from clearing must be disposed of off site by the Contractor at his expense. Disposal of combustible material by burning will not be permitted. The Contractor will be held responsible for observing the by-laws and regulations of the relevant local authority and for any injury to persons and damage to property caused by any fire starting on site, in his camp, or a fire started for any reason by his employees, regardless of whether such injury or damage is the direct or indirect result of such fire.

PSC 5 CONSTRUCTION**PSC 5.2.3.2 Individual Trees**

Delete the second sentence of the Sub-Clause and substitute the following:

The amount of the penalty payable by the Contractor for the removal or damage by him of a tree designated for preservation shall be as stated in the Employer's Environmental Management Specification and/or Environmental Management Plan (EMP).

PSC 5.3 Clearing

Add the following new Sub-Clauses:

PSC 5.3.1 Restoration of Fences onto Servitude Boundary (New Sub-Clause)

Where existing fencing is encroaching on the pipeline servitude, such fencing shall be removed prior to construction and re-erected to a condition no worse than that pertaining prior to the removal, on the formal cadastral boundary all as indicated on the respective land plans. For the period that the fence or wall is dismantled and not yet re-erected, the Contractor shall erect, at the end of each day's operations, a temporary fence to close the gap in the existing fence or wall and shall maintain adequate security to prevent use of the temporary fence as a point of access by unauthorised persons.

PSC 5.3.2 Temporary Fencing Closures (New Sub-Clause)

Where the pipeline route crosses an existing fence or wall, a section of fencing or wall not exceeding 10,0 m in length may be removed temporarily during construction and thereafter reinstated to a condition no worse than the original condition as soon as the pipeline has been installed and backfilled in the immediate vicinity of the crossing. For the period while the existing fence or wall is dismantled, the Contractor shall erect, at the end of each day's operations, a temporary fence to close the gap in the existing fence or wall and shall maintain adequate security to prevent use of the temporary fence as a point of access by unauthorised persons.

PSC 5.3.3 Demarcation Fencing of Pipeline Servitudes in populated areas (New Sub-Clause)

In populated areas and where directed by the Employer's Agent the Contractor shall also supply, install and maintain temporary fencing on both sides of the working area (servitude) and around the perimeter of all agreed additional working areas during construction for prevention of unauthorised access and shall remove on completion of the works. The fencing shall comprise 2m high Bonnox 4 x 4 Mesh fencing, Bonnox pattern 1972/4, with straining posts and straining wires as required and according to supplier's directions and with mesh spacing not exceeding 100mm in both the vertical and horizontal directions. Chevron tape shall be interwoven in a zig zag pattern from the top to the bottom of the fence thereby clearly marking off the working area.

Gates shall be provided by the Contractor at all points as required for construction access purposes. The Contractor shall be held responsible for the control of access at these gates at all times as well as to the worksite during removal and re-erection of fencing. No other opening in

the fence shall be permitted and the Contractor shall be responsible for monitoring the fencing on a daily basis and repairing any such opening within the same day that it is detected. Notices in two official languages (English and isiZulu) shall be attached to the fence where appropriate to indicate that the site is for personnel employed on the Contract only and that unauthorised entry is forbidden.

PSC 5.3.4 Childproof Barrier (New Sub-Clause)

In proximity to residential areas, and wherever ordered, the Contractor shall provide and fix to the demarcation fencing described in PSC 5.3.3 above, approved and substantial plastic square mesh to act as an additional childproof barrier and shall remove it on the completion of the works."

PSC 5.4 Grubbing

In the fourth line delete "200mm" and substitute 300mm.

PSC 5.6 Conservation of Topsoil

Add to the Sub-Clause:

All topsoil shall be conserved for later use by stockpiling, clear of the working area.

PSC 5.8 Demolition of Structures

Add the following new Sub-Clauses:

"PSC 5.8.1 Removal and Re-Erection of Structures

Where the Contractor is directed to dismantle structures to facilitate construction and thereafter to re-erect the same structures, the structure shall be erected at the same location, or such other location as may be required by the owner within the same property, using the same or similar materials as those set aside when removing the structure. The acceptance of the work by the Employer's Agent and certification for payment shall be subject to the Contractor submitting to the Employer's Agent documentary evidence of the owner's satisfaction that the re-erected structure, the over-riding consideration being that it shall be in a condition no worse than that pertaining prior to its removal.

The tendered rates shall include for the provision of a detailed photographic and written record of the structures before dismantling commences and following re-erection.

PSC 5.8.2 Demolition of Building Structures

Where the Contractor is directed to demolish structures, the Contractor shall provide a Method Statement for the approval of the Employer's Agent. Entering upon the premises for the purpose of the demolition shall not commence before the Contractor has received a release form, duly authorised by representatives of the Employer's Agent and the Employer's Agent, in which any special conditions applicable to the demolition are documented".

PSC 8 MEASUREMENT AND PAYMENT**PSC 8.2 Scheduled Items****PSC 8.2.9 Transport Materials and debris to unspecified sites and dump**

Delete the sub-clause and substitute:

The cost of cartage to the approved disposal site(s) shall not be paid separately and shall be deemed to be included in the Contractor's rates for site clearance.

PSC 8.2.10 Remove Topsoil to a Nominal Depth of 150 mm and Stockpile

Delete from the sub-clause heading the words: 'to a Nominal Depth of 150 mm'
Add to the Sub-Clause:

The topsoil shall be conserved for later use by stockpiling clear of the working area.

PSC 8.2.11 Fences (New Sub-Clause)

Separate payment will be made for dealing with fences in the manner specified in PSC 5.3.1 above as scheduled.

PSC 8.2.12 Restoration of Fences onto Servitude Boundary (New Sub-Clause)

Payment will be made per linear metre of temporary fencing installed in the manner specified in PSC 5.3.1 above, and the rate shall include for maintaining such fencing in good condition, including daily surveillance and repair, throughout the duration of construction and removal on completion of the works.

PSC 8.2.13 Temporary Fencing Closures (New Sub-Clause)

Payment will be made per linear metre of temporary fencing installed in the manner specified in PSC 5.3.2 above, and the rate shall include for maintaining such fencing in good condition, including daily surveillance and repair, throughout the duration of construction and removal on completion of the works.

PSC 8.2.14 Removal and Re-Erection of Structures (New Sub-Clause)

Separate payment will be made for removing and re-erecting structures in the manner specified in PSC 5.8.1 above as scheduled and including for the costs of photographic and written records.

PSC 8.2.15 Demolition of Building Structures (New Sub-Clause)

Separate payment will be made for demolishing structures in the manner specified in PSC 5.8.2 above as scheduled and including for the cost of removal of rubble to an approved spoil site, backfilling any excavations and compacting to 90% mod AASHTO and shaping the ground level in line with the natural terrain.

PSC 8.2.16 Saw cut existing asphalt (New Sub-Clause)

The existing asphalt is to be cut from surface to the underside of the asphalt layer and not into the lower levels. The payment shall be made for the length of each saw cut.

PSC 8.2.17 Removal of existing asphalt (New Sub-Clause)

After the existing asphalt layer is saw cut, the contractor shall remove the layer and dispose of at an approved dump site. The payment shall consist of removing the layer by hand and disposing at the approved dump site.

PSC 8.2.18 Demarcation Fencing (New Sub-Clause)

Payment will be made per linear metre of temporary fencing installed in the manner specified in PSC 5.3.3 above, and the rate shall include for maintaining such fencing in good condition, including daily surveillance and repair, throughout the duration of construction and removal on completion of the works.

PSC 8.2.19 Childproof Barrier (New Sub-Clause)

Separate payment will be made as an extra-over for the installation of plastic mesh on the demarcation fencing to provide a childproof barrier in the manner specified in PSC 5.3.4 above and the rate shall include for maintaining such barrier in good condition throughout the duration of construction so as to serve its intended purpose and removal on completion of the works.

C3.7.4 PSD: EARTHWORKS
(Applicable to SABS 1200 D - 1990)

PSD 3 MATERIALS

PSD 3.2.1 Material suitable for Embankments and Terraces

Embankment material shall be compacted to 90% modified AASHTO density.

PSD 4 PLANT

Add the following new Sub-Clauses:

PSD 4.5 Restriction on use of Plant (New Sub-Clause)

Where the Contractor finds it impractical to use mechanical plant for excavation or to complete portions of the work due to restrictions caused by difficult access or the presence of existing structures, pipelines or services shown on tender drawings, the Contractor will be deemed to have satisfied himself as to the alternative requirements when entering rates against the appropriate items in the Bill of Quantities as no claim for extra payment based on the inability to use plant in such circumstances will be considered.

PSD 4.6 Vibration loadings from use of Plant (New Sub-Clause)

The onus will be on the Contractor, when proposing to use heavy plant or equipment to complete work in close proximity to a existing structures, pipelines or services, to determine the effect of the vibration loading from the plant or equipment on the supporting ground or foundation and the structure, pipeline or service and take all necessary steps to ensure that the stability or integrity of the element concerned is not compromised by the particular selection and use of plant or equipment.

Any damages caused to existing elements directly or indirectly arising out of the use of plant and equipment in close proximity shall be made good, to the satisfaction of the Employer's Agent by the Contractor at his own expense.

PSD 5 CONSTRUCTION

PSD 5.1.1.1 Barricading and Lighting (Refer SANS 1921-1 Clause 4.18.2 and 4.18.3)

Delete the Sub-Clause and substitute :

Without limiting any obligation which the Contractor may have in terms of any Act, Ordinance or other legislation, the Contractor shall ensure that all excavations which are accessible to the public or which is adjacent to a public road or thoroughfare, or by which the safety of persons may be endangered are protected as set out in clause 13 of the General Safety Regulations of the Occupational Health and Safety Act, 1993 and that watchmen are employed to ensure that barricades, barriers and lights are effective at all times.

Trench excavations shall be adequately protected by means of fences or barricades so as to enclose the spoil and the excavations, as approved by the Employer's Agent. Fences shall have at least two horizontal double sided 'red/white' chevron tapes approved by the Employer's Agent. The tapes shall be stretched tightly between supports along both sides and ends of the excavation at levels approximately 0,45 m and 1,25 m above the ground. The supports shall consist of poles or iron standards securely planted in solid ground at not more than 10 m centres so as to enclose the spoil and the excavations.

Bridges for vehicles and/or pedestrians shall be provided along the route of the work as and where may be considered necessary by the Employer's Agent. They shall consist of a

number of suitably sized steel plates laid across open excavated trenches. They shall be protected on each side by a stout two rail timber safety barrier, at least 1m high, consisting of 150 x 75 mm timber verticals set firmly into the ground, 75 mm x 50 mm rails securely fastened to them. At least 4 lamps or reflective markers must be provided at each crossing.

Where construction is in, or across public roads, barricades or barriers and temporary road signs shall be erected. All such signs and positioning thereof shall comply with the requirements set out in Road Note 13 read in conjunction with the SA Road Traffic Signs Manual.

PSD 5.1.1.2 Safeguarding of Excavations (Refer SANS 1921-1 Clause 4.18.3)

In sub-clause a) delete the words "Machinery and Occupational Safety Act" in the third and forth lines and substitute "regulations to the Occupational Health and Safety Act, 1993"

PSD 5.1.1.3 a) Explosives (New Sub-Clause) (Refer SANS 1921-1 Clause 4.7)

Notwithstanding Sub Clause 5.1.1.3 the Employer's Agent shall be notified at least 48 hours beforehand of the Contractor's intention to use explosives on site.

It shall be incumbent on the Contractor to make himself aware of the restrictions to blasting imposed by electric transmission or telephonic lines and other similar services. Where the presence and location of electric transmission or telephonic lines etc, are known or are shown on the Employer's Agent's drawing at tender stage the Contractor must make allowance in his rates and programmes for restrictions and delays which may result from restrictions imposed by the authorities.

PSD 5.1.1.3b) Use of Explosives (New Sub-Clause) (Refer SANS 1921-1 Clause 4.7)

Generally, the Contractor will be permitted to use explosives for breaking up rock and hard material during excavations, for demolishing existing structures and for such other purposes where it may normally be required, subject to the following conditions:

- a) The Employer's Agent or Inspector of Explosives shall have the power to prohibit the use of explosives in cases where in his opinion, the risk of injury or damage to persons, property or adjoining structures is too high. Such action by the Employer's Agent shall not entitle the Contractor to any additional payment for having to resort to other less economical methods of construction unless otherwise provided in the Contract Data or Bill of Quantities.
- b) Should blasting be necessary, the Contractor shall take every precaution to protect the Works and persons, animals and property in the vicinity of the site. The Contractor will be held responsible for any injury or damage caused by any blasting operations and shall make good such damage at his own expense.
- c) The requirements for the Explosives Regulations Act (Act 26 of 1956) and the requirements of the Inspector of Explosives shall be complied with. In addition, where applicable, the requirements of Chapter 9 of the Regulations published in terms of the Mines and Works Act (Act 27 of 1956) and the requirements of the Government Mining Engineer shall be complied with.
- d) A copy of each blasting permit issued to workmen, and of each permit issued to the Contractor to cover the purchase, storage and transport of explosives, shall be handed to the Employer's Agent. The Contractor shall grant the Employer's Agent access to all records maintained for the Inspector of Explosives or the Government Mining Engineer, as the case may be.

- e) Before any blasting is undertaken, the Contractor, together with the Employer's Agent shall examine and measure up any buildings, houses or structures in the vicinity of the proposed blasting and establish and record together with the owners thereof the extent of cracking or damage that may exist before commencement of blasting operations. The Contractor shall produce a photographic record of neighbouring structures before blasting commences. These structures will be pointed out by the Employer's Agent. It shall be the responsibility of the Contractor to make good at his own expense any further damage to such houses, buildings or structures which is a result of the blasting.
- f) Where there is reasonable danger of damage to power and telephone lines or any other property, the Contractor shall suitably adapt his methods of blasting, the size of the charges and use adequate protective measures such as cover blasting in order to limit the risk of damage as far as possible.
- g) When blasting to specified profiles, the Contractor shall so arrange the holes and charges that the resulting exposed surfaces are as sound as the nature of the material permits. The Contractor shall make good at his own expense any additional excavation necessitated by the shattering of rock in excess of any overbreak allowance specified in the Specification Data or in any other specification or given on a drawing.

PSD 5.1.1.3c) Limitations for Blasting (New Sub-Clause)

- a) Approval of methods and keeping of records

No blasting work may be carried out prior to the Employer's Agent approval being given in writing.

Prior to starting any drilling for the first section of blasting, the Contractor shall submit for approval to the Employer's Agent, details of the proposed overall methods of blasting that will be used on site, including spacing, depth and pattern of holes, charging levels (kg/m^3), spacing and positioning of relays, method of blast initiation, precautions to prevent 'fly rock', maximum charge per relay, traffic arrangements during blasting, and any other details he may consider relevant. These details shall be submitted in writing and supported with sketches at least 7 days before the commencement of drilling and blasting.

The Employer's Agent will evaluate these details in relation to the given limitations and prior to giving his approval, will indicated to the Contractor any changes that may possibly be needed to comply with the limitations.

For all subsequent blasts, the Contractor shall, at least 24 hours beforehand, notify the Employer's Agent of the intention to blast and at the same time shall note if any changes will be made relative to the approved method.

The Employer's Agent reserves the right to order the Contractor to modify his method of drilling and blasting, or to employ reduced blasting, without thereby invalidating the Contract. The Contractor shall have no claim for extra payment, over and above his tendered rates, due to his being ordered to use such a different method of drilling or blasting or reduced charges, regardless of any prior approval by the Employer's Agent of any previous method.

After every blast, the Contractor shall, within 24 hours, submit to the Employer's Agent details of the actual total mass of explosives used, the approximate volume of material loosened and the maximum simultaneous mass of explosives detonated (maximum charge per relay).

Notwithstanding any approval given by the Employer's Agent, the Contractor shall at all times be responsible for the safety of the Works, persons, animals and property in the vicinity of the Site during blasting operations.

b) *Vibrations*

Blasting vibrations are caused by the transmission of the shock wave from the explosion charge through the material being blasted. This shock wave could cause damage to structures in the vicinity of the blasting if the vibrations are not limited to acceptable levels. Damage to structures is closely associated with peak particle velocity of the ground vibrations in the vicinity of the structure. Advisable maximum levels for peak particle velocity are given in Table 2.

Table 2 - Maximum Particle Velocities (Vibration)

Maximum peak particle velocity (mm/s)	Effect on people and buildings
0,5	Threshold of human perception unlikely to cause damage of any type
5	Limit for blasting adjacent to historical monuments
25	Limit for blasting near private dwellings in order to reduce disturbance to residents to a minimum
50	Limit for blasting adjacent to residential structures on good foundations
84	Limit for property owned by concern doing the blasting (ie. minor plaster cracks acceptable)
120	Recommended maximum level for blasting adjacent to sturdy reinforced concrete structures

The peak particle velocity V is related to the distance D from the blast and the maximum mass of explosive E instantaneously detonated (maximum charge per relay) by the general equation:

m

$$V = \frac{k}{D^n} \times E^m$$

where k , m and n are constants for a particular set of circumstances. V is in mm/s, D is in metres and E is in kilograms. Experimentation has shown that $n = 0,5$ but k and m have to be determined for each site by means of vibration measurements. However blasting can be safely conducted without vibration measurements or expert advice if the following relationship is used:

$$V = \frac{1150}{D} \times E^{0.5}$$

which gives the maximum charge levels for $V = 50$ mm/s listed in Table 3.

Table 3 - Maximum Charge Levels

Minimum distance from nearest blast hole structure (m)	Maximum charge mass per relay (kg)
10	0,19
20	0,76
30	1,7
40	3,0
50	4,7
60	6,8
70	9,3
80	12,1
90	15,3
100	18,9

Only *detonating relays of at least 20 milliseconds delay interval shall be used.*

The above relationship can be used to calculate charge mass for other velocity limits. However, if higher charge levels have to be used for practical reasons, expert advice and possibly vibration measurements will be required.

Notwithstanding the above blasting limits, the Contractor shall at all times be responsible for the safety of the Works, person, animals and property in the vicinity of the Site during blasting operations.

PSD 5.1.1.3d) Negligence (New Sub-Clause)

The Contractor shall be liable for all damages to services caused as a result of the Contractor's negligence.

PSD 5.1.2.2 Detection, Location and Exposure (Refer SANS 1921-1 Clause 4.17)

Add to the Sub-Clause:

All existing services on the site may not be shown on the Drawings or be visible on the site. The Employer's Agent may order excavation by hand in order to search for and expose services. An item has been included in the Bills of Quantities to cover the cost of such work if so ordered by the Employer's Agent.

Where a service is damaged because of the Contractor's negligence, he shall be liable for the costs involved in the repair of the service and any other costs consequent upon the interruption of the damaged services.

PSD 5.1.4.3 Excavated Material Not to Endanger or Interfere (Refer SANS 1921-1 Clause 4.10)

Delete the sentence: "If the necessitywill be borne by the Employer."

PSD 5.1.6 Road Traffic Control

Delete from the fifth, sixth and seventh lines all words following “stated in the project specification”.

An item has been included in the Bills of Quantities to cover the relevant costs.

PSD 5.1.7 Excessive Pollution (New Sub-Clause) (Refer SANS 1921-1 Clause 4.19)

The Contractor shall take all reasonable measures to minimize excessive noise and dust nuisance, pollution of streams and inconvenience to or interference with the public or others because of the execution of the works.

PSD 5.2.2.1 Excavation for General Earthworks and for Structures (Refer SANS 1921-1 Clause 4.10)

Add to the Sub-Clause :

- (f) Where outside shuttering is ordered by the Employer’s Agent, the excavations shall be carried out for an extra width of not more than 600mm all around the structure, measured from the base of the face to be shuttered, to allow for the shuttering to be fixed, this extra excavation and refilling where necessary is to be measured and paid for under quantities allowed for this purpose in the Schedule. Outside shuttering shall be used for the construction of all major structures unless ordered otherwise by the Employer’s Agent.
- (g) Where permanent concrete is to be placed against an excavated face, the excavation shall be trimmed to ensure that there is no projection greater than 20mm protruding into the excavation profile.

PSD 5.2.2.3 Disposal

Delete the second sentence and substitute :

“He shall dispose of surplus and unsuitable material in areas approved by the Employer’s Agent”.

PSD 5.2.3.1 Embankments

In the fourteenth line delete “600mm” and substitute “300mm”

In the seventeenth line delete “300mm” and substitute “150mm”

On the twentieth line delete the sentence starting ‘Each layer shall be ‘ and substitute the following :

Each layer shall be compacted to achieve 90% modified AASHTO density except where indicated otherwise on the Drawings.

PSD 5.2.4.2 Topsoiling

Delete the Sub-Clause and substitute:

Where scheduled, topsoil shall be placed on all surfaces and on embankments and shall be lightly compacted by wheeled vehicles or by tamping, and trimmed neatly to the required lines grades and levels. The final thickness of topsoil after compaction shall be at least 100mm. Prior to topsoiling, the surfaces to be topsoiled shall be prepared by pulling horizontal ruts into the soil with the tines of a front-end loader or other suitable method to retard erosion of the topsoil.

PSD 5.2.4.3 Grass or other vegetation

Add to the Sub-Clause :

The surface of topsoiled embankments, terraces and other designated areas are to be planted with fine sturdy approved grass as specified elsewhere. The grassed areas are to be fertilized and watered until the area is fully covered with grass.

PSD 5.2.5.1 Freehaul

Delete the Sub-Clause and substitute :

All haul will be regarded as freehaul. No overhaul will be paid under this contract.

PSD 5.5.5.2 Overhaul

Delete the Sub-Clause.

PSD 6 TOLERANCES**PSD 6.3 Excavation by Mechanical Means (New Sub-Clause)**

Where bulk excavation is carried out by earthmoving equipment, such excavation will only be allowed to within a level of 300mm, or less as ordered by the Employer's Agent, above the general level to which the ground has to be reduced, the balance of the bulk excavation being carried out by hand or by other means approved by the Employer's Agent.

PSD 7 TESTING**PSD 7.4 Tests to the Contractors Account (New Sub-Clause)**

The Contractor shall make arrangements with a soils testing laboratory to undertake the following tests and to pass the test results to the Employer's Agent. The costs of such tests shall be included in the rates tendered for the appropriate item in the Bills of Quantities.

- a) *Material imported from outside the Contract Site as working surfaces, subgrade improvement or for fill material*

One CBR and indicator test per 200m³ of compacted material brought on site, (river sand will normally be exempted from this requirement). A sample and one CBR and indicator test of the material proposed for importation shall be submitted to the Employer's Agent for approval prior to the commencement of importation.

- b) *Fill material in place*

One density and moisture content per 100m³ of compacted fill

- c) *Compacted subgrade or finished level*

One density and moisture content per 200m² of compacted surface area.

Should any of the above density tests fail to comply with the specified requirements, the Contractor shall at his own expense remedy the failure and submit a new test to the Employer's Agent.

PSD 7.5 Determination of Compaction (New Sub-Clause)

Determination of the standard of compaction achieved shall be carried out in accordance with Standard methods of testing road construction materials published by the Department of Transport Division of National Roads, Publication TMH.1.

PSD 7.6 Tests at the Employer's Request (New Sub-Clause)

Where CBR, indicator tests and the like are required on materials from within the Contract Site the Contractor shall also make arrangements with a soils testing laboratory to undertake these tests, the costs of which have been allowed for in the Bills of Quantities as a provisional sum. Payment for such tests will be per sample tested and reported to the Employer's Agent.

PSD 8 MEASUREMENT AND PAYMENT

PSD 8.1.1 Basic Principles Delete the first

sentence and substitute:

"The basic principles of measurement and payment for all earthworks are that the rates tendered for excavation shall cover the cost of excavating and re-use of the excavated material in backfilling, forming embankments, etc., including any necessary additional offloading, stockpiling and reloading and the cost of disposal of any".

PSD 8.1.2 Basic Principles
In the eighth line delete "Drawing D-2" and substitute "Fig D-2"

Delete the first line of the first sentence and substitute :

"Excavations which are required to be backfilled, or partially backfilled, will be measured as if taken out"

Delete the fifth and sixth lines and substitute :

"other such structures, the volume will be measured from the finished outline of the concrete, or the blinding to the concrete (as the case may be), as shown on the Drawings.

PSD 8.3.2 Bulk Excavation

Delete the second sentence and substitute :

"The rate shall cover the cost of complying with all precautions required in terms of 5.1 in addition to the cost of excavation, offloading to stockpile, stockpiling and reloading as may be necessary, spreading or backfilling, compacting and watering"

"Drawing D-1" in the fifth line and in the last line to read "Fig D-1"

PSD 8.3.3 Restricted Excavation

"Drawing D-2" in the first line to read "Fig D-2"

PSD 8.3.4 Importing of Materials

Delete sub-clauses (b) and (c).

Add the following sub-clauses

PSD 8.3.4 (d) for embankment construction

The rate shall cover the cost of royalties (if any) and acquiring suitable material, loading, transporting with freehaul distance, unloading, spreading in layers not exceeding 150mm thick, watering, compacting to 90% Mod AASHTO density, trimming slopes of embankment to required outline all in accordance with the Specifications. The rate shall also include for carrying out density testing and the disposal of any surplus material.

PSD 8.3.4 (e) for backfilling around structures

The rate shall cover the cost of royalties (if any) and acquiring suitable material, loading, transporting with freehaul distance, unloading, spreading in layers not exceeding 150mm thick, watering, compacting to 90% Mod AASHTO density, trimming upper surfaces to the required outline all in accordance with the Specifications.

PSD 8.3.14 Overbreak (New Sub-Clause)

Where hard rock is encountered in bulk or restricted excavations, the Contractor shall be reimbursed for excavation and refilling with concrete Grade 10/40 under the base and for the relevant grade of concrete for the structure walls for an excess of 200mm thickness beyond the scheduled excavation line. If a blinding layer is indicated then the 200mm shall be taken from the uppermost surface of the blinding layer.

No additional items have been provided for reimbursement of any additional excavation, concrete infill and/or formwork over and above the allowance stated. The Contractor is required to make his own estimate of any additional costs he feels may be required and these are to be included in the above mentioned items. The method of measurement shall be on the basis of the area of rock encountered within the nett outline of the structure only and regardless of actual excavated levels.....
..... Unit m³

C3.7.5 PSDB: EARTHWORKS (PIPE TRENCHES)

(Applicable to SABS 1200 DB - 1989)

PSDB 2 INTERPRETATIONS**PSDB 2.1 Supporting Specifications**

Add New Sub-Clause:

PSDB 2.1.3 Specification for Labour Intensive Methods

SANS 1921 Part 5 shall also apply in the case of labour-based excavation.

PSDB 3 MATERIALS**PSDB 3.1 Classes of Excavation**

Add to the Sub-Clause :

The classification of materials in respect of areas designated for hand excavation shall be as per Annex B of SANS 1921 Part B (Tables B.1 & B.2).

PSDB 3.3 Selected Granular Material

Delete the Sub-Clause and substitute :

Selected granular material shall be material of a granular, non-cohesive nature that is singularly graded between 0,6 mm and 10 mm, is free-draining and has a compactibility factor (as determined by the test given in Section LB of Part 3 of SABS 0120) not exceeding 0,4.

(for bedding material (padding) for steel pipes see PSLB 3.3)

PSDB 3.4 Selected Fill Material

Delete the Sub-Clause and substitute :

The category 'Selected Fill Material' shall apply to HDPE piping only. For steel piping all material up to the underside of backfill shall be measured as selected granular. (for bedding material (padding) for steel pipes see PSLB 3.3)

Selected fill material for HDPE piping shall be a sandy clay material having a PI not exceeding 6 and that is free from vegetation and from uncrushable lumps and stones of diameter exceeding 20mm.

PSDB 3.5(a) Backfill Material

In the third line delete "150mm" and substitute "100mm".

PSDB 3.5(b) Backfill Material

In the second line delete "PI not exceeding 12" and substitute "PI not exceeding 6".

PSDB 3.5(c) Cement Stabilised Backfill (New Sub-Clause)

Where scheduled, or directed by the Employer's Agent, backfill shall be stabilised with 5% cement by mass. The backfill material shall have a plasticity index not exceeding 10 and all material must pass through a sieve of aperture size not exceeding that specified in SABS 1200 LB, Sub-Clause 3.2, as amended.

The dry materials shall first be mixed in a concrete mixer, whereafter sufficient water is to be added to produce the stiffest consistency available for placing and compacting with vibrators.

PSDB 3.6 Materials for Reinstatement of Roads and Paved Areas

Delete the Sub-Clause and substitute:

Material used in the reinstatement of roadways shall fall into the following relevant categories:

- (a) Foundation material recovered from the excavation of trenches across existing roadways which, if so instructed by the Employer's Agent, shall be set aside and re-used as subbase material.
- (b) New material which shall conform to the requirements of:
 - (i) Clause 3.2.1 of SABS 1200 ME for the Subbase
 - (ii) Clauses 3.2 and 3.3 of SABS 1200 MF for the Basecourse
 - (iii) Clause 3.2.2 of SABS 1200 ME for the Gravel Wearing Course
 - (iv) Clause 3 of SABS 1200 MH for the asphalt surfacing

PSDB 3.7 Selection

Delete the second sentence and substitute the following :

The Contractor is not required to use selective methods of excavating but shall, if so instructed by the Employer's Agent, screen or otherwise treat excavated material in order to produce material suitable for the bedding cradle or the bedding blanket.

PSDB 4 PLANT**PSDB 4.1 Excavation Equipment**

In the first line delete "The Contractor" and substitute : "In sections deemed to be excavated by mechanical means, the Contractor" Add to the Sub-Clause :

Should any portion of a pipe trench exceed the specified depth, the Contractor will be held responsible for any additional costs which may arise as a result of such over-excavation. Concrete filling or imported compacted fill may be ordered by the Employer's Agent to be placed below the bottom of the trench.

PSDB 4.3 Compaction Equipment

Add to the Sub-Clause :

In sections designated to be compacted by labour-based methods hand stampers shall be used as per requirements of Clause 4.3 of SANS 1921 Part 5.

PSDB 5 CONSTRUCTION

PSDB 5.1.1 General

Add to the Sub-Clause:

In the case of Labour Intensive Methods the method of excavation of trenches is subject to determination according to the method described in PSDB 5.4.1.

PSDB 5.1.2.3 Sloping Ground

Delete the Sub-Clause and substitute :

The Contractor shall be responsible throughout the duration of the Contract, inclusive of the Defects Liability Period, for the provision of all soil erosion preventative measures necessary to protect the trenches, pipes and land utilised by the Contractor during the Contract from any adverse effects of soil erosion, settlement, scour, etc., resulting from the construction of the Works.

Cross embankments, generally extending across the full width of the working strip, consisting of low earth mounds shaped to rounded form and so oriented as to have a fall of 1% along their length, shall be constructed with compacted material having a minimum density of 90% modified AASHTO density and minimum dimensions and maximum spacings dependent on the slope of the ground along the length of the pipeline, as indicated in the following table :

Slope of Ground	Minimum Height	Minimum Base Width	Maximum Spacing
0% - 2%	No cross-embankments required		
2% - 5%	300 mm	1,2 m	55 m
5% - 10%	300 mm	1,2 m	40 m
10% - 15%	375 mm	1,5 m	30 m
Greater than 15%	450 mm	1,7 m	20 m

The height of the cross-embankments for a distance of 1 metre on either side of the trench centreline shall be raised 150mm above the remainder of the cross-embankment to allow for settlement. In order to form a satisfactory drainage channel upstream of each cross-embankment (at a slope of 1%) the crown over the backfilled trench shall be removed for a distance of 0,5m upstream of the cross-embankment.

Cross-embankments shall be constructed to the same minimum standards and dimensions indicated above wherever artificial slopes have been formed on the working strip or other areas used during construction and, with the approval of the Employer's Agent, are permitted to be so left.

Payment will be made for the construction of cross-embankments in accordance with SubClause 8.3.4(c), provided construction thereof has been either ordered or approved by the Employer's Agent prior to the commencement of such construction.

PSDB 5.1.2.4 Cross-Walls in Trenches (New Sub-Clause)

In steeply sloping trenches (longitudinal slope > 15 %) and where otherwise ordered by the Employer's Agent, the Contractor shall place sacks of earth as sack breakers or cross walls around and above the pipe up to ground level, prior to backfilling, as a soil erosion measure. Such sacks shall be filled with selected material free of stones in excess of 50mm maximum dimension. One sack breaker shall consist of these sacks packed tightly against the trench bottom, pipe and actual trench sides, and against each other to form a solid cross wall at least 0,5m thick from the bottom of the trench to the surface.

An item has been included in the Bills of Quantities to cover the cost of the supply, installation and maintenance of sack breakers.

PSDB 5.2 Minimum Base Widths

Add to the Sub-Clause :

Trench sides shall be as near vertical as possible in order to minimise the quantity of backfill material required and to avoid possible difficulties where pipelines have to be installed parallel to existing services, fences, hedges, etc and to minimise the loading on the pipe.

The base width for trenches for cables, ducts and unbedded flexible continuous piping, of external diameter less than 125mm laid at a depth not exceeding 1,5m, shall be equal to the external diameter of the cable, duct or pipe, plus a side allowance of 200mm on either side.

PSDB 5.4 Excavation

Add to the Sub-Clause :

Where a pipe is to be laid in a vertically-sided trench with temporary side support, it is necessary to ensure that the compacted bedding and backfill is hard up against the soil forming the trench side by withdrawing the temporary supports stage by stage as the backfill rises up the trench. Where the pipe trench crosses surfaced roads, the Contractor shall neatly cut two parallel grooves into and through the "black top" before excavating between the grooves. The grooves are to be set back at least 200 mm from the edge of the excavation face to prevent ravelling of the cut edge. The cost of this operation, where not scheduled separately, will be held to be covered in the general rates for excavation.

PSDB 5.4.1 Determination of Method of Excavation (New Sub-Clause):

Trenches for pipelines shall be excavated by either mechanical means or by hand, determined as follows:

Trial holes of minimum dimensions 1,0 x 1,0 m shall be excavated by hand along all pipeline routes at 50 m intervals ahead of the Contractor's programme for trench excavation. The trial holes shall be 800 mm deep or less if intermediate or hard rock material is encountered.

If intermediate or hard rock material is encountered in the top 800 mm of excavation at such trial holes, then excavation may be deemed to be carried out by mechanical means, the length of such excavation determined on the basis of other trial hole findings.

If soft material only is encountered at such trial holes, then excavation may be deemed to be carried out by hand up to a maximum depth of 1,5m, the length of such excavation determined on the basis of other trial hole findings. The consistency of the material shall be determined as per Table 1 of SANS 1921-Part 5 and the Classification of excavated material shall be as per Annex B of SANS 1921-Part 5 (Tables B.1 & B.2).

If intermediate or hard rock material is encountered in those stretches set aside for hand excavation on the basis of the trial hole findings, then the Contractor may be allowed to remove the intermediate or hard rock material by mechanical or whatever means, the rate for which is to include for backfilling and re-excavating (if necessary).

PSDB 5.5 Trench Bottom

Add to the Sub-Clause :

Where steel pipes are laid in waterlogged conditions and/or where so instructed by the Employer's Agent a 150mm thick layer (See PSLB 5.2.5) of imported single sized stone (19mm size unless otherwise instructed by the Employer's Agent) with a geofabric filter surround ("bidim" Grade A4 or similar approved) shall be constructed under the bedding layer specified for the pipes.

PSDB 5.5.1 Jointing Holes (New Sub-Clause)

Jointing holes shall be cut of sufficient length and depth to allow for the proper making or bolting of pipe joints and to ensure that joint collars or sleeves do not rest on the trench bottoms. After the pipework has been inspected, tested and approved by the Employer's Agent, the jointing holes shall be refilled with selected soft material free from stone and then rammed to provide a continuous uniform support for the pipework. No specific payment will be made for forming and refilling holes, the cost of which is deemed to be included in the tendered rates.

PSDB 5.6.1 Backfilling - General

Add to the Sub-Clause:

Notwithstanding the requirements of Sub-Clauses 5.6.1 and 5.6.6, no pipe joint or pipe fitting shall be covered by either blanket or backfill material prior to the successful completion of the visual inspection and pressure testing of the relevant section of the pipeline.

All backfilling shall be carried out by hand and the Contractor must price his tender accordingly. No mechanical plant shall be used in backfilling without prior written consent of the Employer's Agent.

PSDB 5.6.2 Material for Backfilling

Delete fourth, fifth and sixth lines and substitute the following :

Hard rock material shall not be used for, or incorporated into, the backfill above the bedding layers without the Employer's Agent approval.

PSDB 5.6.3 Disposal of Soft Excavation Material

Add to the Sub-Clause :

Surplus material or unsuitable material shall be disposed of off site by the Contractor.

PSDB 5.6.4 Disposal of Intermediate and Hard Rock Material

Delete the Sub-Clause and substitute :

Surplus intermediate and hard rock material from trench excavations shall be disposed of off site by the Contractor.

PSDB 5.6.8 Transport for Earthworks for Trenches

Delete the Sub-Clause and substitute :

The requirements of Sub-Clause 5.2.5 of SABS 1200 D as amended and as applicable shall apply.

(Refer also PSD 5.2.5.1 & 5.2.5.2)

PSDB 5.7.2 Areas subject to Traffic Loads

Add to the Sub-Clause:

for an extent of 2 m on either side of the carriage-way at each crossing.

PSDB 5.9.4 Bitumen Roads: Sub-Base and Base

Add to the sub-clause:

Each Tenderer shall include in his tender allowances to cover the costs of reinstating all surfaces and inclusive of all layers to their conditions pertaining before the commencement of construction.

Items have been included in the Bill of Quantities to cover the reinstatement of certain surfaces (concrete and/or asphalted/gravel driveways and/or roads) and for payment purposes, the area of those specific surfaces shall be calculated from the product of the length of the trench and the specified trench width plus 400 mm (refer PSDB 5.4).

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.1.4 Basic Principles

Delete the Sub-Clause and substitute :

Except that the volume will be computed as specified in 8.2.3, the requirements of Sub-Clause 5.2.5.1 (Freehaul) of SABS 1200 D as amended and as relevant, shall apply to freehaul.

No additional payment will be made for excavating and backfilling bell (fox) holes as the cost of that work will be deemed to be included in the rates for trenching.

PSDB 8.3.2 Excavation

Delete Sub-Clause and substitute:

a) Excavation in all materials for trenches and dispose of surplus material. Rate to include for all temporary works including trimming, shoring and dewatering as required. b) Extra-over item (a) above for:

- (1) Excavation in Intermediate materialUnit : m³
- (2) Excavation in Hard rock materialUnit : m³
- (3) Excavation in Boulder Class A materialUnit : m³
- (4) Excavation in Boulder Class B materialUnit : m³

Separate items will not be provided for depth increments. Volume will be computed from the trench width determined in accordance with 8.2.3 and the depth from the top of the intermediate or hard rock excavation, as the case may be, either to the bottom of the same material or to the bottom of the trench as specified in (a) above, whichever is the lesser (see Drawing DB-5).

The rates shall cover the cost of the excavation and handling of the material as classified and the disposal of rock and other surplus or unsuitable material.

Measurement of Extra Over for (3) and (4) above will not apply to any length of trench in soft material more than 2 m long. Surplus boulder material from trench excavation shall where applicable, be disposed of to the designated spoil areas except where shown otherwise on the drawings.

PSDB 8.3.3.1 Make up deficiency in Backfill Materials

Payment for imported, graded stone laid under pipelines in accordance with PSDB 5.5 shall be paid for under either Sub-Clause 8.3.3.1(a) or (b) or (c) as scheduled.

PSDB 8.3.3.4 Overhaul

Delete the Sub-clause and substitute :

All haul will be regarded as free haul. There will be no overhaul payment in this contract.

PSDB 8.3.4(c) Cross Embankments (New Sub-Clause)

Payment for cross embankments will be by volume of embankment constructed in accordance with the specification. Unit : m³

PSDB 8.3.5 Existing Services that Intersect or Adjoin a Pipe Trench

Add to the end of the Sub-Clause :

- (v) all work involved in locating the service by hand excavation
- (vi) notifying and attending upon the proprietor of the service
- (vii) supporting and protecting the service while the pipeline is installed, inspected, tested and backfilled.

PSDB 8.3.6.2 Grassing (New Sub-Clause)

Grassing..... Unit : m²

Approved grass shall be planted after topsoiling has been completed. The planted area shall be neatly trimmed, fertilised and watered. The Contractor shall ensure that the planted areas are not permitted to dry out. Any grass that fails to grow shall be replaced by the Contractor, at his own expense, with fresh grass, until satisfactory cover is obtained. The rate shall cover the supplying, planting and maintenance of grass, all in accordance with this specification.

PSDB 8.3.8 Sack Breakers (New Sub-Clause)

Sack breakers shall be installed from the bottom of the bedding to 300 mm below finished ground level. Unit
: No

PSDB 8.3.9 Excavate Trial Holes to Determine Method of Excavation (New Clause)

Excavation by hand of trial holes of minimum dimensions 1,0 x 1,0 m to depth of 800 mm, or less if intermediate or hard rock material is encountered, along all pipeline routes at 50 m intervals. Including use of DCP for classification of material.

Including backfilling of the trial holes when notified by the Employer's Agent.

Hand excavation of trial hole..... Unit
No

C3.7.6 PSDK: GABIONS AND PITCHING

(Applicable to SABS 1200 DK - 1996)

PSDK 3 MATERIALS**PSDK 3.1.1 Stone**

Add to the Sub-Clause:

Stone that is hard and unweathered may be selected from the earthwork excavation. Where no suitable stone is available from excavation the supply shall be at the Contractor's option. The transport of the stone shall be included in the rate for supply.

The stone shall be subjected to both the weathering and the durability tests (see Sub-clauses 7.3 and 7.4).

PSDK 3.1.2 Gabion cages

Add to the Sub-Clause:

The wire used for the fabrication of gabion boxes and mattresses and for lacing and bracing operations shall be to SABS 675 and galvanised for Class A – heavy galvanised mild steel wire. No PVC coating will be required.

The gabion baskets and mattresses shall be as follows:

Gabion boxes constructed of double twisted, hexagonal wire mesh gabions of nominal 80 mm mesh, with 3,4 mm o/d frame wire and 2,7 mm o/d mesh wire. Complete with partitions at 1 m centres. All wire is mild steel to SANS 1580 - 2005, Class A, zinc coated by heavy duty hot dip galvanising to SANS 675 - 2007.

Each basket shall be complete as described in SANS 1200 DK.

PSDK 3.1.3 Geotextile

Add to the sub-clause:

The filter blanket shall consist of "non woven" spun bound polyester fabric having a mass of 210 g/m², permeability of 0,003 m/s and multi-direction tensile strength of 16 000 N/m such as KAYMAT Grade U24.

The filter blanket must be attached to the gabion wall, basket or mattress by an approved method of fastening, which must ensure that the blanket will stay in position during construction of the infilling behind the gabion wall. The material to be used as fill immediately adjacent to the gabion wall must have good drainage properties to ensure that there is no build up of pore pressure behind the wall and be free of sharp rocks that could damage the filter blanket.

PSDK 3.2.1 Stone

Add to the Sub-Clause :

Medium pitching, as stated in Table 2 of 3.2.1 shall be used in this contract.

PSDK 3.2.3 Wire netting

Add to the Sub-Clause:

Wire netting for gabion and mattress cages shall be hexagonal steel wire mesh strengthened by selvages of heavier wire and by mesh diaphragms that divide the cases into 1 m compartments.

Nominal 80 mm mesh shall be used for gabion cages with 2,4 mm diameter galvanised steel wires. Nominal 60 mm mesh shall be used for mattress cages with 2,0 mm diameter galvanised steel wires.

Selvedge wire shall be galvanised and the diameter shall be in accordance with Table 3 of SABS 1200 DK.

PSDK 5 CONSTRUCTION

PSDK 5.1.2 Lacing of Cages

Add to the Sub-Clause:

Each diaphragm shall be connected in the same manner to the sides and top panels in addition to the bottom panel. All gabion and mattress cages shall be connected to adjacent gabion and/or mattress cages by lacing the adjacent selvages together with galvanised steel wire.

PSDK 5.1.3 Type of cage (New Sub-clause)

The size of cages for gabions and mattresses shall be as shown on the drawings and measured in the Schedule of Quantities.

PSDK 5.1.4 Diaphragms (New Sub-clause)

Each diaphragm shall be connected in the same manner to the sides and top panels in addition to the bottom panel.

PSDK 5.2.2 Geotextile or Geomembrane (New Sub-clause)

(c) Filter blankets may be required behind the gabion baskets in order to prevent leaching of the embankment material through the gabion retaining structure and revetments. The Employer's Agent may order, in writing, that the inside face of the gabion wall shall be lined with a filter blanket.

PSDK 5.2.3 Assembly

Add to the Sub-Clause:

All gabion and mattress cages shall be connected to adjacent gabion and/or mattress cages by lacing the adjacent selvages together with 2,0 mm dia. galvanised steel wire. The lacing shall be in accordance with Sub-Clause 5.1.2.

PSDK 5.2.4 Rockfilling

Add to the Sub-clause:

Particular care shall be taken in the filling gabions and mattresses so as to ensure that the voids in the rockfill are reduced to the minimum that can be reasonably achieved. In order to minimise the voids in the rockfilling, the filling shall proceed in layers not exceeding 300 mm deep and each layer shall be rodded and barred so as to compact the rockfill before filling of the next layer commences. Where appropriate, hand packing of selected rock particles shall be carried out.

PSDK 5.2.4.2 Mattresses used in revetments and aprons

Add to the Sub-clause:

Where gabions and mattresses are placed in exposed positions the rock particles forming the exposed faces shall be specially selected so as to present a fair and even surface.

PSDK 5.3.4 Wired Pitching

Add to the Sub-Clause:

The areas in which wired or grouted wire pitching is to be used will be indicated on site by the Employer's Agent.

PSDK 5.3.6 Rock Bolsters (New Sub-Clause)

Where rock bolsters are specified or directed by the Employer's Agent (in particular below the outlet of stormwater pipe culverts), the rock shall be dumped or pushed into place as indicated by the Employer's Agent. The heap of rock shall conform to the dimensions, i.e. length, width, height ordered by the Employer's Agent, to a tolerance of 300 mm.

PSDK 8 MEASUREMENT AND PAYMENT**PSDK 8.2.3 Extra-over 8.2.2 for Packing Selected Stone for Exposed Face**

Add to the Sub-Clause:

The method of selecting and packing stone for exposed faces as scheduled shall be as specified in Sub-clause 5.2.7 - Special Finish.

C3.7.7 PSDM: EARTHWORKS (ROADS, SUBGRADE)
(Applicable to SABS 1200 DM - 1981)**PSDM 2.1 INTERPRETATIONS- Supporting Specifications**

SABS 1200 A and SABS 1200 D are applicable to this contract.

PSDM 3 MATERIALS**PSDM 3.2.1 General**

Add to the Sub-Clause:

The nomenclature used for the classification of various material types to be used in the designated pavement layers is that defined in the NITRR documents TRH4 and TRH14.

PSDM 3.3.1 Selection – General

Add to the Sub-Clause:

Should insufficient materials of a quality acceptable for use in the selected layer be found in the excavations the balance of the material required for the selected layer shall, when instructed by the Employer's Agent, be obtained from the Contractor's own source.

PSDM 3.4 Road Foundation Layers (New Sub-Clause)

The proposed gravel road foundation specification is:

- Rip and compact in situ roadbed material to 90% mod AASHTO density
- 150 mm imported G7 wearing surface compacted to 93% Mod AASHTO density

PSDM 5 CONSTRUCTION**PSDM 5.1.1 Safety, Existing Services, Stormwater, etc and Nuisance**

Add to the Sub-clause:

All existing services may not be shown on the drawings or be visible to the Contractor on site. The Employer's Agent may order excavation by hand to expose such sources.

Where service is damaged because of the Contractor's negligence, he shall be liable for the repair of such service and shall bear all costs involved in the repair and other costs or losses due to the interruption of the services.

PSDM 5.1.2 Accommodation of Traffic (To be read in conjunction with SANS 1921-Part 2)

Add to the Sub-Clause:

The Contractor shall accommodate traffic on the existing roads. The Contractor is required to construct detour roads where sections of road are temporarily closed.

Work adjacent to existing roads must be properly barricaded – see PSD.

The Contractor shall provide signs for the temporary accommodation of traffic as required.

PSDM 5.2 Methods and Procedures**PSDM 5.2.2.5 Disposal of Surplus or Unsuitable Material**

Add to the Sub-Clause:

Surplus and unsuitable material shall be disposed of as instructed by the Employer's Agent.

PSDM 5.2.8.1 Freehaul

Add to the Sub-Clause:

All movement of cut and fill material, borrow material and surplus material will be regarded as freehaul.

PSDM 5.2.8.2 Overhaul

Delete the Sub-Clause.

PSDM 8 MEASUREMENT AND PAYMENT**PSDM 8.2.1 Earthworks Measurement**

Add to the Sub-Clause:

Earthworks will be measured by volume in compacted embankment once only as compacted fill from cut or borrow, whichever is applicable. Uncompacted fill from cut, material placed to stockpile or to spoil will be measured insitu as excavation.

PSDM 8.3.4 Cut to Fill, Borrow to Fill

Add the words: "and in borrow pits" after the words "road prism" in the second line of the payment paragraph.

Add the following:

"The rate shall also cover the cost of selection of suitable material in the borrow pit."

"The rate for borrow to fill does not include the cost of excavating, loading and unloading or anything which is covered by Item 8.3.4 of SABS 1200 D."

PSDM 8.3.5 Selected Layer compacted to 93% of Modified AASHTO Maximum Density

Replace this item with the following:

PSDM 8.3.5.1 Selected Layer from Borrow Pit (New Sub-Clause)

Selected layer compacted to 90% of modified AASHTO density Unit : m³

The rates shall cover the cost of procuring, furnishing, transporting and placing the selected layer material and compacting the material to the specified densities."

PSDM 8.3.14 Borrow Pits

Replace the words: Sub-clause 8.3.6(b) of SABS 1200 D or Sub-clause 8.3.4 of SABS 1200 DA, as applicable" with Sub-clause 8.3.4(a) of SABS 1200 D."

Add the following items:

PSDM 8.3.14.1 Material from Designated Borrow Pits (New Sub-Clause)

- (a) Royalties payable on material from designated borrow pits Unit : PC Sum

The amount allowed shall be expended in accordance with Clause 6.6 of the General Conditions of Contract and will be used to reimburse the Contractor for royalties paid to the landowner for material borrowed and used as subgrade and subbase.

- (b) Percentage on amount paid to landowner for borrow material Unit : %

The percentage tendered shall include full compensation for any charges for labour, profit, transport, establishment and other charges the Contractor may wish to include.

PSDM 8.3.17 Accommodation of Traffic (New Sub-Clause) (to be read in conjunction with SANS 1921Part 2)

Accommodation of traffic Unit : Sum

The tendered sum for the accommodation of traffic shall include full compensation for all items of cost necessary for such accommodation and the construction and maintenance of bypasses, including existing roads used as bypasses during the construction period. It shall also include full compensation for traffic control, the provision of traffic signs and, where necessary, communications equipment required to regulate traffic, for the construction of any necessary temporary drainage works, for the maintenance of all drainage works, arranging for the moving of services and subsequent reinstatement thereof, attending to traffic problems and complying with the requirements of the Road Traffic Ordinance and the relevant local authorities.

Payment shall be made in equal monthly instalments from the date of commencement of such work to the end of the contract period.

C3.7.8 PSGA: CONCRETE (SMALL WORKS)
(Applicable to SABS 1200 GA - 1982)**PSGA 2 INTERPRETATIONS****PSGA 2.3(a) General**

Add to the Sub-Clause:

Adverse weather : Cold weather or weather in which:

- (a) the ambient temperature is above 25°C, or
- (b) the relative humidity is low, or
- (c) the wind velocity is high

or weather in which any combination of these three conditions occurs, and which tend to impair the quality of fresh or hardened concrete or otherwise causes the concrete to have abnormal properties.

PSGA 2.3(b) Quality

Add to the Sub-Clause:

Consistency : The extent, as measured by the slump test, to which fresh concrete resists flow or deformation.

PSGA 2.3(d) Exposure Conditions (New Sub-Clause)

Mild Conditions : Conditions under which the concrete is protected from the weather and exposed only to air.

Moderate Conditions : Conditions under which the concrete is:

- (a) sheltered from severe rain and is not subject to freezing when wet, or
- (b) buried in non-aggressive soil, or
- (c) continuously under fresh water

Severe Conditions : Conditions under which the concrete is exposed or subjected to any of the following:

- (a) driving rain
- (b) alternate wetting and drying out
- (c) freezing when wet
- (d) fresh water (at the water-line)
- (e) splashing or spraying with fresh water
- (f) corrosive fumes or heavy condensation of water
- (g) aggressive soil
- (h) salt-laden air

PSGA 3 MATERIALS**PSGA 3.2.1 Applicable Specifications**

The standard cement specifications SABS 471, SABS 626, SABS 831, SABS 1466 and SABS 1491, have been withdrawn and are replaced by SANS 50197-1: Common cements, and SANS 50413-1: Masonry cement. These specifications will be applicable to this Contract and the descriptions and types of cements, where specified, will be based on the designations as defined in these specifications.

Add to the Sub-Clause:

Unless agreed to otherwise by the Employer's Agent, the cement used on the works shall be either Type Cem 1, Type Cem 11/A-S or Cem 11/B-S (all of minimum strength Class 32,5).

PSGA 3.2.2 Storage of Cement

Add to the Sub-Clause:

Cement and other cementitious materials shall not be kept in storage for longer than two months without the Employer's Agent permission.

PSGA 3.4.4 Admixtures (New Sub-Clause)

Unless approved by the Employer's Agent, neither admixtures nor air-entraining agents shall be used in any concrete.

PSGA 3.4.5 Sand (New Sub-Clause)

Sand from a source selected by the Contractor and approved by the Employer's Agent after testing will be used under this Contract.

PSGA 4 PLANT**PSGA 4.4.2 Finish**

Delete sentence and substitute:

The quality of the finished surface of the concrete shall be as scheduled.

PSGA 5 CONSTRUCTION**PSGA 5.1.2 Fixing**

Add to the Sub-Clause:

Welding reinforcement as a means of securing it against displacement will not be permitted.

PSGA 5.1.3 Cover

Add "(with a tolerance of +10mm –0)", between "30mm", and "unless" in the second line of the Sub-Clause.

In second line read "40mm" for "30mm"

PSGA 5.2.1 Classification of Finishes

Delete the eighth and ninth lines of the Sub-Clause.

PSGA 5.2.1(a) Classification of Finishes - Rough

Add to the Sub-Clause:

The finish of the concrete is to be within the tolerances of Degree of Accuracy III as set out in SubClause 6.4.

PSGA 5.2.1(b) Classification of Finishes - Smooth

Add to the Sub-Clause:

The finish of the concrete is to be within the tolerances of Degree of Accuracy II as set out in SubClause 6.4.

PSGA 5.2.3 Removal of Formwork

Add to the Sub-Clause:

The minimum times for removal of formwork from concrete containing blast furnace cement given in Table 1 of SABS 1200 GA apply also to members of concrete made from a blend of equal parts of Ordinary Portland Cement and other cementitious materials.

PSGA 5.2.5 Fixing Blocks for Reinforcing and Fixtures in Concrete (New Sub-Clause)

Fixing blocks for the attachment of fixtures may be embedded in concrete provided that the strength and other desirable features such as appearance of the member are not, in the opinion of the Employer's Agent impaired thereby.

The Contractor shall be responsible to provide samples of fixing blocks as proposed for use in the contract in good time for the Employer's Agent inspection. The acceptance of such blocks shall be subject to Employer's Agent approval.

PSGA 5.4.1.2 Consistency

Delete the third line and substitute the following:

Employer's Agent in respect of prescribed mix and/or strength concrete.

PSGA 5.4.1.4 Prescribed Mix Concrete

Delete the Sub-Clause and substitute the following:

The grades of prescribed mix concrete are designated Grades 20, 15 and 10 and are composed of cement, sand and stone, as specified hereinbefore, proportioned as follows:

<u>Grade</u>	<u>Size of Stone</u>		<u>Cement</u>		<u>Sand</u>		<u>Stone</u>	
	(mm)		(kg)		3) (m		(m3)	
20/19	19		50		0,110		0,140	
15/19	19	50	0,130	0,140	10/38	37,5	50	0,160
0,200								

While the proportion of cement to the combined quantity of sand and stone must remain constant for each grade of concrete, as set out above, the relative proportions of sand and stone are to be adjusted, if required by the Employer's Agent, so as to obtain the most suitable consistency of concrete, due to allowance being made for the bulking of sand due to moisture.

The addition of water shall be regulated by the use of properly calibrated containers, only sufficient water being added as will, in the opinion of the Employer's Agent, afford a workable mix.

The fine and coarse aggregates approved for use in strength concrete Grades 30 and 25 are to be used for prescribed concrete mixes Grades 20 and 15.

PSGA 5.4.1.5 Strength Concrete

Add to the sub-clause:

The grade of strength concrete is designated Grade 25 (25 MPa) and Grade 30 (30 MPa).

The concrete mix for the abovementioned grade of strength concrete is to be designed by an approved laboratory. At least four weeks before placing any concrete on the Works, the Contractor shall supply and deliver to the approved laboratory, at his own cost, samples of the aggregates he proposes to use in the concrete mix. While the proportion of cement to the combined quantity of sand and stone will remain constant for each grade of concrete, as set out above, the relative proportions of sand and stone may be adjusted to achieve the required strength. The laboratory will be bound by the requirements of this Specification which are to guide the Tenderers in pricing the grade of strength concrete. The Contractor is to allow in his rate for strength concrete an amount to cover the fees and charges levied by the approved laboratory in designing the strength concrete mix.

PSGA 5.4.1.6 Ready-mixed Concrete

Delete the Sub-Clause and substitute the following:

Concrete produced at a central concrete production facility other than at the site of the Works shall only be accepted for use in the Works with the prior and express approval of the Employer's Agent. The Contractor shall submit in good time, in support of his proposal, a concrete design mix, together with test results of the aggregates proposed and test results for the design mix when using the aggregates proposed, in the format as provided by the Employer's Agent. When such approval has been given concrete cubes and all other

applicable tests shall be made on site and the test results obtained by the facility concerned will be used for reference purposes only.

PSGA 5.4.5.5 Adverse Weather Conditions (See PSGA 2.3(a)) (New Sub-Clause)

Under adverse cold weather conditions, effective measures shall be taken to ensure that the temperature of the concrete, from the time of placing until it has hardened (i.e. about 24 h), is maintained at not less than 5°C. If the atmospheric temperature in the vicinity of the concrete is below 2°C or is expected to fall below 2°C during the curing period (see Sub-Clause 5.4.7), water shall not be used for curing. All surfaces shall be protected from ice or frost damage.

When the ambient temperature is above 32°C, the temperature of the concrete when deposited shall not be allowed to exceed 32°C. Under adverse hot weather conditions, the Contractor shall take all reasonable steps to reduce to a minimum the placing temperature of the concrete. Stockpiles of aggregates and all metal surfaces in contact with aggregates and concrete shall be shielded from the direct rays of the sun or cooled by being sprayed with water, and windbreaks shall be erected, if necessary, to prevent the initial rapid drying-out of concrete which would otherwise occur before normal curing procedures can be undertaken.

Concrete shall not be placed during periods of heavy or prolonged rainfall.

PSGA 5.4.7 Curing and Protection

Add to the Sub-Clause:

- (d) continuously spraying the exposed surfaces with water;
- (e) covering the concrete with waterproof or plastic sheeting firmly anchored at the edges.

The Contractor should base his method on water curing. The use of a curing compound shall not be allowed unless with the written approval by the Employer's Agent.

PSGA 5.4.8.2 Concrete Surfaces

Concrete surfaces shall be finished as indicated in the Schedule.

PSGA 6 TOLERANCES

PSGA 6.1.1 General

Read "Degree of Accuracy II" for "Degree of Accuracy III" in the third line.

PSGA 8 MEASUREMENT AND PAYMENT

PSGA 8.1.1.4 Formwork

Add to the first line between the words “concrete” and “and” the following:

“including forming fillets or splays up to 20 x 20mm”

PSGA 8.4.1 Prescribed Mix Concrete

Delete from the Sub-Clause all but the first sentence.

Add to the Sub-Clause:

Where scheduled, the rate shall include for all shuttering and finishing.

C3.7.9 PSL: MEDIUM-PRESSURE PIPES)
(Applicable to SABS 1200 L – 1983)**PSL 2 INTERPRETATIONS****PSL 2.4 Abbreviations**

Add to the Sub-Clause:

"CML": Cement Mortar Lining

"FBMDPE: Fusion bonded medium density polyethylene."

PSL 3 MATERIALS**PSL 3.1 General**

Add to the Sub-Clause:

"Steel pipes of diameter DN200 and above will be supplied by the Employer as "free issue.

Details of the pipes that will be made available by the Employer to the Contractor under this Contract are given in Clause C3.4.2."

PSL 3.1.1 Materials Control (new sub-Clause)

Add new Sub-Clause:

PSL 3.1.1.1 Checking Material Lists and Drawings (new sub-Clause)

Add new Sub-Clause:

Not more than 4 weeks after the contract has been awarded the Contractor shall complete his check of the Materials Lists against the drawings and advise the Employer's Agent of any shortages or omitted items.

If any variations in the contract are authorised, the Contractor shall ensure that any additional items to be supplied by the Employer and the Contractor are ordered in good time so as not to cause delay to the works.

The Contractor shall check the delivery timing of all items and ensure that it is in line with the Contract programme. Any critical items that could be delivered late are to be brought to the attention of the Employer's Agent.

The delivery status of materials is to be checked and followed up upon by the Contractor throughout the contract.

PSL 3.1.1.2 Materials Control –General (new sub-Clause)

Add new Sub-Clause:

The Contractor is held responsible for the inspection and control on site of all the materials and equipment for the duration of the Contract. Once material and equipment has been accepted, any subsequent damage shall be made good to the satisfaction of the Employer's Agent at the expense of the Contractor. Damage to internal linings and external coatings that are necessary and incidental to good welding practices and the manufacturing of pipe specials are excluded.

Any item damaged beyond repair shall, at the discretion of the Employer's Agent, either be replaced at the Contractor's expense or the value reimbursed in full to the Employer.

PSL 3.1.1.3 Acceptance of Pipes, Fittings and Materials (new sub-Clause)

Add new Sub-Clause:

Before acceptance of any pipes, fittings or other items of equipment the Contractor is to carry out a thorough inspection to ensure that the materials have been delivered undamaged and are as ordered.

Pipes shall be checked for:

- ✦ Identification
- ✦ Certification
- ✦ Soundness and Internal lining
- ✦ Ends bevelled correctly
- ✦ Circumference according to specification and within tolerance

Inspection of pipe fittings, valves and other equipment shall include, but is not limited to:

- ✦ Identification
- ✦ Certification
- ✦ Material schedule and rating
- ✦ Lining, where specified
- ✦ Coating where specified
- ✦ Circumference according to specification and tolerance
- ✦ Damage to items – example flange faces

Defective items shall not be accepted, but marked, quarantined and immediately reported to the Employer's Agent.

If accepted, the Contractor shall take the required steps to ensure that all delivery documentation together with signed acceptance notes is filed in the Construction Dossier.

PSL 3.1.1.4 Material Storage (new sub-Clause)

Add new Sub-Clause:

The Contractor shall store all items so that no damage occurs whilst awaiting installation. Where practical, items are to be stored in lockable containers for protection from the weather and pilferage.

All piping, pipe fittings and equipment stored outside or awaiting installation are to be protected from the weather and storm water and soil wash and stored on pre-prepared surfaces. Pipes taken over from the Employer shall receive the required attention in order to ensure safe storage in yards, protected from fires, vandalism and incidental damage that can reasonably be prevented.

PSL 3.1.1.5 Handling Pipe, Fittings and Equipment (new sub-Clause)

Add new Sub-Clause:

Strict supervision shall be maintained at all times when handling pipes and equipment. Particular attention is to be given to correctly rated lifting gear, slings and lifting beams. All lifting gear is to be inspected regularly for signs of wear and tear in terms of the relevant Safety Legislation and Clauses. Equipment is to be lifted at the recommended points specified by the manufacturer. Pipe is to be lifted with a lifting beam and slings, which shall be fitted at quarter points around the pipe. Due care shall be taken when fitting and placing slings to ensure that ancillary items do not get crushed during lifting. Pipe coating is to be protected by padding or otherwise from scuffing damage during lifting.

The equipment utilized for lifting pipes is subject to approval by the Employer's Agent and all equipment judged unsuitable according to this specification or found to be unsuitable in practice shall be removed from site and replaced at the Contractor's expense. It is prohibited to handle pipes using chains or any other device involving metal contact with the pipe coating.

The Contractor shall ensure that all lifting equipment complies with the relevant safety regulations at all times.

Wet sponge tests shall be done to detect holidays on internal linings of the pipes.

The Contractor shall, at his own expense, test each and every surface area, that is internal as well as external coating during construction as per this specification. Testing for holidays shall be done after inclusion of materials, manufactured specials and equipment, as well as pipes, into the permanent works. Any defects found shall be repaired and the costs for remedial work shall be deemed to be included in the tendered rates for the construction of the pipeline. These tests and results shall be recorded on the Quality Control Plan as approved by the Employer's Agent.

PSL 3.2 AC Pipes and Specials

Delete the Sub-Clause in its entirety.

PSL 3.4 STEEL PIPES, FITTINGS AND SPECIALS**PSL 3.4.1 General**

Add to the Sub-Clause:

"Steel pipes of diameter DN200 and above that are to be used on this contract shall be supplied by the Employer as free issue" and shall be collected by the Contractor at the pipe yards indicated by the Employer's Agent. All fittings and specials supplied by the Contractor under this Contract shall be to the dimensions and details shown on the drawings or as scheduled in the Bills of Quantities. Each piece shall have its relevant item number stamped and painted onto the exterior surface prior to despatch from the manufacturer's premises.

Steel pipes DN 150 and smaller shall be manufactured in accordance with SABS 62.

SANS 719

Steel pipes supplied by the Employer shall be checked for acceptance by the Contractor in accordance with SANS 719 and including the integrity of the coatings and linings.

PSL 3.4.2 Pipes of Nominal bore up to 150 mm

Delete: "medium class, shall be screwed"

and substitute:

"heavy class, shall have plain ends, be galvanized,"

PSL 3.4.3 Pipes of Nominal Bore over 150 mm

Delete the Sub-Clause in its entirety.

PSL 3.4.4 Fittings and Specials

Add to the Sub-Clause:

"All bends, fittings and specials shall be manufactured from straight pipe specified elsewhere unless otherwise stated in the Bills of Quantities.

All steel bends, fittings and specials shall be fabricated to the dimensions and details shown on the drawings and/or described in the Bills of Quantities.

The sides of taper pieces shall diverge at an angle of not more than 11° to each other.

The bend, fitting, and special fabricator shall supply written confirmation that all hand welding was carried out by coded welders.

Individual bends, fittings and specials smaller than DN 200 shall be hot-dip galvanised to heavy duty grade in accordance with SABS 121:2000 after fabrication. Where a hot dipped galvanised fitting is to be welded to a coated and lined pipe, the galvanising is to be abraded off prior to welding. The external coating at the welded joint is to be primed and coated with an approved anti corrosion system.

Bends, fittings, and specials of DN 200 and larger shall have the internal lining and external coating made continuous ("made good") as specified elsewhere for welded joints on coated and lined pipes.

Bends, fittings and specials shall be manufactured and tested in accordance with the specification for straight pipe and additionally with Section 8 of BS EN 10311: 2005 and BS 10224: 2002. The nominal dimensions of each bend, fitting and special required are itemised in the Bills of Quantities and/or on the drawings and 'exact length' tolerances shall be adhered to. All plain ends on bends, fittings and specials shall have the plain ends prepared for butt welding except those plain ends that are to be jointed with adaptor joints.

Bends shall generally be of the segmented type except where otherwise stated or shown on the drawings.

The bend, fitting, and special fabricator shall supply written confirmation that all hand welding was carried out by coded welders.

Bends greater than 90° shall be fabricated from combinations of items from the table above.

Shop drawings of bends, fittings and specials shall be submitted to the Employer's Agent for approval prior to manufacture.

All flanged bends, fittings and specials shall be hydraulically tested at the fabricator's premises to the same pressure that they will be subjected to during the hydraulic testing of the completed pipeline. No visible signs of leakage will be permitted."

PSL 3.4.5 Puddle Collars and Anchoring Flanges (New Sub-Clause)

Add new Sub-Clause:

"Puddle collars and anchoring flanges used as pipe anchorages shall be of the same dimensions as corresponding flanges but those cast into concrete walls are to be undrilled. The collar/flange shall be capable of transmitting a longitudinal force 33% greater than the internal hydraulic pressure to be applied when testing, multiplied by the area of the bore and, under that condition, the stress in the material shall not exceed its yield stress.

Where puddle collars are shown on the drawings as being 20 mm thick, those collars are not required to transmit thrust, their purpose being to assist with the waterproofing of the concrete chambers by increasing the path that ground water might have to take to enter the chambers.

Where polyethylene pipes are cast into concrete structures, they shall be specially prepared and adapted by positioning a custom-made tight-fitting natural rubber sealing sleeve around the circumference of the pipe and in the case of structured-wall pipe creating shear keys through removing small segments of the outer wall. The rubber seal shall be 10 mm thick and 200 mm wide or 80% of the width of the wall and shall be 60 to 65 shore hardness, with a vulcanised joint. It shall need to be stretched over the pipe circumference to ensure a tight fit."

PSL 3.4.6 Closure Pipes (New Sub-Clause)

Add new Sub-Clause:

"Closure pipes, which are to be cut on site to the exact lengths, shall have the diametrical tolerances specified for the pipe ends applied over the full length of the pipe. Closure pipes shall be supplied in standard lengths."

PSL 3.4.7 Welding Tests at fitting Fabrication Shop(s) (New Sub-Clause)

Add new Sub-Clauses:

"PSL 3.4.7.1 Qualification Tests for Welding Procedures

Only appropriately coded welders may be used.

The qualification tests for welding procedures shall be carried out generally in accordance with the requirements of the American Petroleum Institute API 1104. The detailed procedure to be adopted during manufacture shall be established and the quality of the welds so produced shall be determined by carrying out one transverse tensile weld test and two guided cold bend tests on suitable coupon plates.

The tests are to be carried out either before fabrication of fittings is commenced.

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The coupon plates shall be prepared either from plates of the same material as the pipe and welded in a similar manner to that to be used during production, or by cutting suitable specimens from a pipe selected at random by the Employer's Agent from the first production. The coupon plate for the tensile weld test and those for the guided cold bend tests shall be prepared in accordance with the requirements of SANS 719.

The qualification tests shall be considered satisfactory if:

- a) The weld has a joint efficiency greater than 95% of the minimum specified tensile strength of the parent metal and,
- b) The bend test specimens are capable of being bent around a former with a diameter equal to six times the nominal thickness of the plate to an angle of 180 degrees without developing a crack, except at the arrises of the specimen, of length or width greater than 3 m.

Failure to pass the above qualification tests shall result in the rejection of any pipes welded with the procedure used and the preparation of a new qualification of procedure test.

Any changes in the electrode case type used or change of flux used shall require a qualification test before approval of the procedure is granted.

PSL 3.7 OTHER TYPES OF PIPES**PSL 3.7.2 Polyethylene Pipes**

Add to the Sub-Clause:

"HDPE and LDPE pipes shall be of the classes scheduled. Jointing of pipes shall be by means of welding, by bolting up welded-on flanges or by the use of approved external compression type fittings ('Plasson' or similar approved)."

PSL 3.8 JOINTING MATERIALS**PSL 3.8.2.1 Flexible Couplings**

Delete the Sub-Clause and substitute the following:

"Where ordered, steel flexible couplings are to be of the "Viking Johnson"/"Klamflex"/"Aqualok" or similar approved type without central registers, each comprising one centre collar, two special flanges, two rubber rings and hot dipped galvanised mild steel bolts.

Steel couplings shall be assembled strictly in accordance with the manufacturer's instructions and all bolts shall be torqued to the value recommended by the manufacturer. On completion of hydraulic pressure testing of the installation, the entire joint shall be protected as described in Clause PSL 3.9.3.6.

The tendered prices for laying and jointing are to include for the supply of all necessary materials, plant and labour to complete the joint.

Flexible couplings shall conform generally to BS 10311: 2005 for slip-on type couplings and shall be of approved manufacture. They shall be capable of being tightened and released without damaging or improperly distorting the rubber seating rings and shall be designed to prevent the rubber rings being blown out under pressure or sucked in under vacuum.

Each coupling is to be capable of withstanding the test pressure applicable to the pipes with which they are to be used without exceeding a stress in the steel of 67% of the yield point.

Mild steel couplings shall be protected by an approved epoxy coating system such as an approved solvent-free epoxy (SFE) system such as "Nordbak 1" or similar approved system and applied within 4 hours of abrasive blast cleaning the metal surfaces of the coupling in accordance with ISO 8501-1 Grade Sa 2,5. Nuts, bolts and washers shall be hot dipped galvanised. The plain end of the pipe shall be properly prepared, and in the case of steel pipes before corrosion protection, so as to accept the flexible coupling.

Adaptor couplings and anchoring adaptor joints shall comply with the above specification for flexible couplings and be of a similar design, but one end shall be flanged to enable connection of plain ended pipes to flanged joints. The adaptor joints are to be complete with bolts and nuts for connecting the flanged joint to the anchoring flange situated generally 300 mm to 400 mm from the plain end of pipe. All bolts, nuts and washers are to be hot dipped galvanised. In order to anchor the plain ended pipe to the flanged joint all of the bolts for the flanged joint are to pass through the anchoring flange and are to be fitted with nuts and washers at the flanged joint and on either side of the anchoring flange."

PSL 3.8.3 Flanges and Accessories

PSL 3.8.3.1 Bolted Connections (New Sub-Clause)

Add new Sub-Clause:

"All flanges, gaskets, bolts, nuts washers and other appurtenances required for the execution of the work under this Contract shall be supplied and installed by the Contractor under this Contract and shall comply with the following:

- ✦ The sizes and drillings shall generally comply with SANS 1123 as shown on the drawings or as scheduled in the Bills of Quantities.
- ✦ Flanges cut from steel plate shall be machined flat on the front face, but with a raised face.
- ✦ No machining need be carried out on the back face (except where insulating flanges are to be installed) provided that face is sufficiently flat to ensure square bedding of the bolt heads and nuts and provided that all weld reinforcement is removed.
- ✦ Temporary end covers shall be provided by the Contractor for protection of flanges, and prepared plain ends of pipes and fittings to prevent damage to internal lining during transportation and during handling on site.
- ✦ All piping and flanged surfaces shall be cleaned before connections are made.
- ✦ The (raised) faces of flanges that are in to be in contact with gaskets shall be masked and shall not be painted or coated. The mating flange shall then receive one coat of an approved rust inhibitor. Care shall be exercised to ensure that after the application of all coatings there are no runs or drips on the mating surfaces of the flanges and that the flange profiling is clearly visible over the entire face. Excessive coating build up in flange bolt holes that could snag bolts will not be permitted.

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- ✦ Flanged joints shall be connected with the specified bolts, nuts and washers all of which are to be supplied by the Contractor.
 - ✦ All bolts, tie-bolts, nuts and washers shall be galvanised to SANS 121: 2011 and shall comply with the relevant requirements of SANS 135: 2011 and SANS 136: 2008 where applicable.
 - ✦ The length of each bolt shall be such that after the bolt has been tightened, the end of the bolt shall project beyond the outer face of the nut, but not by more than two threads. Tiebolts on restrained/anchoring couplings shall be fitted with "backing nuts" and washers.
 - ✦ Each flanged joint is to be fitted with an approved and suitably rated gasket and sealed watertight such that there will be no visible sign of leakage under the specified factory and field test pressures and under the in-service working conditions (pressures).

 - ✦ All bolts are to be tightened in a predetermined pattern with opposing bolts being tightened sequentially. When all bolts are tight, each bolt is to be torqued to the required/recommended torque in a predetermined pattern with opposing bolts being tightened sequentially.
 - ✦ All bolt threads shall be liberally coated with "Copper slip" or similar approved compound prior to assembly. Upon completion, bolt heads, washers and nuts shall be wrapped with the "Denso Mastic Blanket System" comprising of a priming solution, mastic blanket, petrolatum tape and lay-flat sheeting as described in elsewhere."

PSL 3.8.4 Loose Flanges for Welding

Add to the Sub-Clause :

"Flange jointing material, when installed in the complete pipeline, shall be capable of withstanding transient pressures of up to the specified field test pressure. Under this condition no damage shall be caused or leakage occur through the joint. Bolts and nuts shall be galvanised to SANS 121: 2011 and shall comply with the relevant requirements of SANS 135: 2011 and SANS 136: 2008 where applicable."

PSL 3.9 CORROSION PROTECTION**PSL 3.9.2 Steel Pipes****PSL 3.9.2.1 Holiday Testing (New Sub-Clause)**

Add new Sub-Clause:

"All Holiday Testing shall be carried out with an instrument approved by the Employer's Agent.

The sparking detection test shall conform to the standards as set out in SANS 1217:2001. The Contractor shall familiarise himself with the dielectric strength (breakdown strength) of all the coatings and linings he works with for the different pipe sizes. The Contractor shall also have an in depth knowledge of the Holiday Testing equipment he works with, in order to calculate the Corona discharge effect for the typical brush being utilised, with reference to the specific ambient conditions for any specific test.

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All Holiday Testing shall be executed at a voltage which is set at 50% of the value of the dielectric strength of the lining or coating being tested. The Contractor shall carefully analyse the loss in test voltage as a result of the Corona Effect, specific to the ambient conditions surrounding the test. The test voltage of the Holiday Testing equipment shall be adjusted such that the voltage drop as a result of the Corona Effect will be taken into account when the actual 50% threshold of the dielectric strength is calculated.

The Holiday Test equipment shall be calibrated by an approved supplier and checked every 30 minutes or every time a test at a different location is started. Each piece of equipment shall have a unique identification number with calibration certificates and detail of equipment utilized shall be submitted to the Employer's Agent for approval. Method statements for the process of holiday testing shall be submitted to the Employer's Agent for approval.

The correct equipment for the type of application will be utilized. For example, where pin holes have been repaired and re testing for effectiveness of repair work being done, the Contractor shall utilize the correct equipment to effect same and this shall include the use of a pencil brush which concentrates the efforts of holiday testing at the repair. Where spark tests are performed on Tape Wrap systems, the minimum brush width shall be 300 mm. The brushes utilized shall be brass bristle cone brushes. The typical brush speed shall be 200 to 300 mm/sec when doing spark tests.

The Contractor shall, at his expense, test each and every surface area, that is internal lining as well as external coating, during construction as per this specification. Testing for holidays shall be done after inclusion of materials, manufactured specials and equipment, as well as pipes, into the permanent works. Any defects found shall be repaired and the costs for remedial work shall be deemed to be included in the tendered rates for the construction of the pipeline. These tests and results shall be recorded on the quality control plan as approved by the Employer's Agent."

PSL 3.9.3 Protection against electrolytic corrosion**PSL 3.9.3.7 External Corrosion Protection of Site-Fabricated Pipe Bends and Fittings (New Sub-Clause)**

Add new Sub-Clause:

"The coating repairs/make good shall be carried out in accordance with PSL 3.9.3.5."

PSL 3.9.3.8 Corrosion Protection of Flanges and Flexible Adaptor/Anchoring Joints (New Sub-Clause)

Add new Sub-clause:

"All flanges and flexible joints and adaptor/anchoring joints and their associated bolts, nuts and washers, shall, notwithstanding that the flexible and adaptor/anchoring joints will be epoxy coated as specified elsewhere, be protected as described below.

(Note: This specification is based on a "Denso" system. Alternative products may be used, subject to approval by the Employer's Agent).

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a) Surface Preparation:

The entire surface area of the flange/adaptor/anchoring joint, and its bolts, nuts and washers, up to no less than 250 mm either side of the joint, shall be cleaned of all dirt and other deleterious matter. The cleaned area, up to 200 mm either side of the flange/adaptor/anchoring joint, shall then be wire brushed.

b) Priming:

The cleaned flange/adaptor/anchoring joint, bolts, nuts, washers and the adjoining 200 mm length either side shall be primed with "Denso Priming Solution", or if moisture is present, with "Denso S105 Paste".

c) Application of Mastic Blankets:

Narrow strips cut from "Denso Mastic Blanket" shall be applied to the flange/adaptor/anchoring joint to achieve a smooth profile with a 50 mm splayed fillet being formed at the joint/pipe interface. Care shall be taken, particularly at bolts, to avoid the formation of air pockets. Complete "Denso Mastic Blankets" shall then be applied (mastic side down) to the flange/adaptor/anchoring joint until the flange/adaptor/anchoring joint is completely enveloped.

The blanket shall be overlapped at least 50 mm and shall extend at least 150 mm along the pipe barrel on each side of the flange/adaptor/anchoring joint. The ends of the blanket shall be bound to the barrel of the pipe on each end with 100 mm wide "Denso Tape". The "Denso Tape" overlaps shall be 50 mm and shall extend 100 mm onto the blanket and 150 mm onto the pipe barrel.

d) Application of Protective Sheetting:

The entire flange/adaptor/anchoring joint shall then be wrapped with 350 micron polyethylene sheeting which shall end 400 mm beyond the joint. The protective sheeting shall be secured to the pipe barrel and along the seam with 48 mm wide "Denso Adhesive Tape".

PSL 3.9.3.9 Coating of Permanently Exposed Pipes/Fittings (New Sub-Clause)

Add new Sub-Clause:

"All pipes which are to be permanently exposed shall, in addition to the specified corrosion protection at flange/adaptor/anchoring joints, be protected with the "Denso Acrylic Pipeline Tape (Steelcoat 500)" system or similar approved UV resistant coating. The pipe surface shall be prepared and the coating applied in strict accordance with the manufacturer's instructions. a) Surface Preparation:

The pipe surface to be wrapped shall be cleaned of dirt, grime, grease and other deleterious matter, using white spirit if necessary and then allowed to dry thoroughly. b) Priming: "Denso Primer D" shall be applied to the prepared surfaces at a nominal coverage rate of 8 m² per litre. Care shall be taken to obtain an even film with no runs or sags. Only those areas that are to be wrapped the same day shall be primed. If primed areas are to be left overnight, these areas shall be re-primed before wrapping.

c) Tape Wrapping:

The joint shall be spirally wrapped (minimum 55% overlap) with "Denso Acrylic Tape" (or approved equivalent) in accordance with the manufacturer's requirements such that the start and end points are located at buried sections of the pipe, before it daylight. A 100% overlap is required on the first and last

revolutions of the tape wrapping operation. It is important that tension in the tape be released when the wrapping of the last half circumference of the pipe.

d) Final Coating:

One coat of "Densoflex Fire Retardant" shall be applied to the exposed pipe at a nominal application rate of 3 m² per litre."

PSL 3.9.3.15 Corrosion Protection of Valves and & Flexible and Flanged Joints (New Sub-Clause)

Add new Sub-Clause:

"Every buried cast iron/steel coupling, joint, flange, and valve, where scheduled, shall be protected by the following "Denso" or equal approved anti-corrosion system:

After the pipework has been satisfactorily tested (and bonded at the couplings for electrical continuity if applicable) the exposed portion of the coupling, joint or flange and the unsheathed portions of the pipes at the joint and the bodies of all buried valves are to be covered with an approved petroleum based mastic/cloth system applied strictly in accordance with the manufacturer's instructions and then covered with two layers of approved adhesive PVC tape. The external sheathing system, which shall be to the approval of the Employer's Agent, shall be carried out as follows:

All loose dirt, rust, mill scale and flaking paint shall be removed by wire brushing all exposed metal surfaces. An approved priming solution shall be applied by brush with care being taken to ensure all exposed metal surfaces are coated.

"Denso", "Corromastic" or equal approved mastic is to be packed around the joint and/or valve body to form an even contour for the application of tape. A fillet is to be formed between the flange and the pipe barrel/valve body and, in the case of flexible couplings, mastic is to be packed around the bolts to a height of 3 mm above the bolts. Care must be taken to ensure that no air is entrapped.

A layer of impregnated tape/cloth is to be spirally applied with a minimum overlap of 50 mm. All air pockets are to be removed.

A 10 mm thick layer of mastic is then to be packed on top of the tape and a second layer of impregnated tape/cloth is to be spirally applied with a minimum overlap of 25 mm. The tape layer is to commence and terminate at least 100 mm over the pipe sheathing on either side of the joint. The surface is then to be smoothed off and all air pockets are to be removed.

An overwrap consisting of two separate layers of approved, 300 micron thick adhesive PVC tape is to be spirally applied with a minimum of 25 mm overlap and with at least two laps over the untreated sheathing on either side of the joint.

The whole sheathed area of the joint is to be subjected to holiday detection and, if proved sound and approved by the Employer's Agent, may be covered with "padding" sand."

PSL 3.9.3.16 Payment for Inspection and Testing

Repairs by the Contractor will be subject to inspection by the Employer's Agent and the Employer's Third Party inspection agent. Should additional expenditure be incurred by the Employer's inspector, due to any failure of the prescribed tests, then such additional expenditure shall be reimbursed to the Employer by the Contractor and shall be deductible from the Payment Certificates.

PSL 3.10 Valves

Delete the Sub-Clause and substitute:

"Valves supplied under this Contract shall comply with the requirements of Particular Specification

PA: Valves which covers Gate Valves, Resilient Seal Valves, Butterfly Valves, Reflux valves and Air Valves."

PSL 3.11 Manholes and Surface Boxes**PSL 3.11.1 Bricks**

Delete the first sentence and substitute:

"Bricks for manholes and surface boxes shall be engineering bricks type FBXE45 or better, with a water absorption not exceeding 7% and complying with the applicable requirements of SANS 227."

PSL 3.11.5.1 Manhole Covers and Frames

Delete the Sub-Clause and substitute:

"Manhole covers shall comply with SANS 558 for the types shown on the drawings and/or scheduled in the Bills of Quantities."

PSL 3.11.6 Sand

Add new Sub-Clause:

"Sand used for mortar (general purpose) and for plaster (external) shall comply with the applicable requirements of SANS 1090."

PSL 3.11.7 Cement

Add new Sub-Clause:

The cement used on the Works shall be Portland cement complying with the requirements of SANS 50197-1 and -2: Common Cements.

PSL 4 PLANT**PSL 4.4 Packing (New Sub-Clause)**

Add new Sub-Clause:

"Goods should be suitably packed in such manner as will ensure safe and efficient transport by road or rail, and the Contractor shall include in his prices for whatever packing may be necessary in this respect. Small items particularly liable to damage or loss in transit should be crated. All crates and packing material shall, after use, become the property of the Employer, unless distinctly specified otherwise, or if returnable, shall be so at the Contractor's expense."

PSL 4.5 Protection of Linings during Transportation (New Sub-Clause)

Add new Sub-Clause:

"The ends of every pipe, fitting and special shall be fitted with suitable end closures as a precautionary measure against damage being caused to the lining material. The end closures shall be capable of preventing the ingress of dirt and at the same time allowing air to ventilate through the pipework which they protect but without drying the linings out (in the case of cement mortar lined pipes) so as to cause them to crack. They shall be secured in such a manner that they cannot be dislodged or damaged by normal pipe handling operations."

PSL 4.6 Marking (New Sub-Clause)

Add new Sub-Clause:

"Every bend shall be marked as stated in PSL 3.4.1 above and, in addition, shall have its deflection angle in degrees and minutes painted on the outer surface.

Packaged items such as nuts and bolts, insertion rings etc shall be marked with a metal label bearing the Contract No and the Schedule Item No. with which they are to be used."

PSL 4.7 Advice Notes and Invoices (New Sub-Clause)

Add new Sub-Clause:

"The Contractor shall submit one copy of every advice note in respect of each individual consignment, quoting the Contract Number, the truck or vehicle number, item numbers and a brief description of the articles so consigned. The advice note shall be lodged with the Employer's Agent 's Representative on Site at least two days before the arrival of the goods."

PSL 4.8 Delivery and Acceptance (New Sub-Clause)

Add new Sub-Clause:

"The material to be supplied under this Contract shall be consigned and delivered to approved areas adjacent to the pipeline route, or to an approved storage area if not required for immediate use."

PSL 5 CONSTRUCTION**PSL 5.1 LAYING****PSL 5.1.1 GENERAL**

Add to the Sub-Clause:

"The Contractor will be responsible for clearing the areas required for pipe storage that shall include the removal of rock, stones and all combustible material. He/she shall also be responsible for maintaining the area in a clean and tidy condition for the duration of the Contract.

Upon delivery of the pipes, fittings, specials and valves, these will be inspected jointly by the Employer's Agent 's Representative and the Contractor. Any items found to be damaged

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shall be returned to the factory for repair or replacement, in which case the costs of additional transport, repair or replacement shall be borne by the Contractor if the pipes were supplied by the Contractor and not by the Employer.

The Contractor will be held fully responsible for the care and safety of all pipes and fittings, etc, on site, and shall bear the cost of all renewals, which may be necessary to make good losses, damages or breakages. Furthermore, he shall be fully responsible for handling and re-loading material at the storage areas and for transporting and offloading of all such materials to the Site of the Works.

Before commencing pipelaying, the Contractor shall properly distribute pipes, fittings and specials, along the trenches. Valves and couplings shall not be distributed until they are actually required for laying in their designed position."

PSL 5.1.2 Damage

Add to the Sub-Clause:

"The Contractor shall be responsible for protecting pipes fittings and valves from grass fires at all times and shall keep grass cut short in the vicinity of all unlayed pipework items.

Should trenches be inundated by water, there is a risk of movement of the pipes by flotation. The Contractor shall ensure that trenches are not flooded by stormwater and that pipes laid in the trench are backfilled as soon as possible after laying, except at joints made with couplings or flanges which must be kept visible until the pipeline has been satisfactorily tested.

Steel pipes with welded joints may, after all specified testing and corrosion protection has been satisfactorily completed and with prior approval from the Employer's Agent, be backfilled at the same time as backfilling the pipeline.

Should movement of the pipes occur, the Contractor shall remove the pipes from the trench and thoroughly clean and relay the pipes. This work shall be carried out at the Contractor's expense."

PSL 5.1.3 Keeping Pipelines Clean

Add to the sub-clause:

"The Contractor shall take all of the steps necessary to prevent flooding of the Works and hence ensure that all work is carried out in the dry, and that the ingress of dirt and or dirty water into the pipes is prevented. The ends of all laid pipes must be closed at all time when work is not being carried out."

PSL 5.1.3.2 Cleaning of Valves and Fittings (New Sub-Clause)

Add new Sub-Clause:

"All flanges, valves, fittings and equipment may only be installed in pipe work after they have been thoroughly cleaned. Flange faces shall be checked for damage before being incorporated into the permanent works and any damage shall be reported to the Employer's Agent."

PSL 5.1.4 Depths and Cover

Delete Sub-Clause 5.1.4.1 and substitute the following:

"Unless otherwise shown on the drawings or scheduled in the Bills of Quantities or ordered, the depth of excavation for trenches for medium-pressure pipelines shall be such that the cover to finished ground level over the laid pipe shall not exceed 1,0 m."

Delete from the third and fourth lines of Sub-Clause 5.1.4.2:

"e.g. the deflection shall not exceed 1,5° per joint in the case of AC pipes"

PSL 5.1.7 Pipe Support (New Sub-Clause)

Add new Sub-Clause:

"Temporary pipe supports may be used to assist setting up and assembly. However, it is preferred that permanent pipe supports are installed as soon as possible to minimize double handling and/or omission during construction.

Permanent pipe supports shall be constructed as indicated on the drawings or as directed on site.

Before testing, all permanent supports shall be complete and all temporary supports removed, unless otherwise agreed by the Employer's Agent."

PSL 5.1.8 End Caps (New Sub-Clause)

Add new Sub-Clause:

"The Contractor shall, at the end of each day's work, fit end caps to the open ends of the pipeline under construction. The end caps shall be manufactured in such a manner that it can be fitted to seal off the pipeline to the extent that it is totally dust and water proof. The end cap shall be able to withstand a pressure of 5 m head of water externally when fitted.

End caps shall be maintained during non-working periods.

The tendered rates for the laying of pipe shall be deemed to include for the supply, fitment, and maintenance of the end caps."

PSL 5.1.9 Marker Posts (New sub-Clause)

Add new Sub-Clause:

"Pre-cast concrete marker posts as shown on the drawings and painted white in colour shall be set at all horizontal direction changes and where otherwise indicated by the Employer's Agent.

The standard marker post rate shall include the supply and erection of painted, inscribed posts. The rate shall be inclusive of erection and shall include for all necessary excavation, mass concrete footing and formwork."

PSL 5.2 JOINTING METHODS**PSL 5.2.2 Flanges (Steel Pipelines)**

In the heading delete "(Steel Pipelines)"

Add to the Sub-Clause:

"Before being brought together, the ends of the pipes, fittings, couplings and flanges are to be inspected and cleaned to ensure that all parts forming the joint are undamaged and clean.

When jointing flanges, the faces shall be cleaned thoroughly and approved jointing material (compressed asbestos cement fibre or other approved gaskets on flanged joints), cut properly to size, is to be inserted immediately before bringing the two flanges together. Before closing the joints, the flanges must be parallel to each other, with all bolts inserted in the bolt holes. After the fittings have thus been aligned and well supported, the joint shall be bolted up to a uniform tightness using torque wrenches to achieve the required compression force on the gasket.

If and where full face gaskets are used, the jointing material shall be flush with, or protrude beyond, the outer circumference of the flange (this is not applicable to raised face flanges). On completion of the joint, the flanges and bolts shall be protected as described in Clause PSL 3.9.3.8."

PSL 5.2.4 Cut Pipes (New Sub-Clause)

Add new Sub-clause:

"Cut pipes shall be used where required as closure lengths. The cut ends shall be dressed square and to a smooth even finish and prepared for butt welding preparation which shall not be inferior to that of the ends of uncut pipes. The finished dimensions of ends cut on site must be within the tolerances applicable to the ends of the particular types of pipe to be laid. The cost of cutting and trimming of pipes shall be included in the rates tendered for laying and jointing pipes."

PSL 5.3 Setting Valves, Specials and Fittings

Add to the Sub-Clause:

"Valves are to be set correctly in the positions indicated and supported on concrete stools, except where not so required by the Employer's Agent. Valve spindle guide brackets and stays where provided shall be secured into position against concrete work and set and carefully adjusted in order to give true vertical alignment of the spindle."

PSL 5.4 Concrete Casing

In the first and second lines delete "a strength 15 MPa/37,5 mm or such other strength as scheduled" and substitute:

"concrete grade 20/19".

PSL 5.5 ANCHOR/THRUST BLOCKS AND PEDESTALS

In the fourth line delete " 15 MPa/37,5 mm " and replace with "20/19".

Add to the sub-clause:

"Steel pipelines that are to be continuously welded or flanged, do not require anchor/thrust blocks at tees, bends, terminal valves and end caps."

PSL 5.5 VALVE AND HYDRANT CHAMBERS**PSL 5.6.1 General**

Delete the references to drawings L1, L2 and L3 and substitute "drawings issued by the Employer's Agent".

PSL 5.6.2 Construction of Chambers

Delete the references to drawings L1, L2 and L3 and substitute "drawings issued by the Employer's Agent".

PSL 5.10 DISINFECTION OF POTABLE WATER PIPELINES

Delete the clause and replace with:

"The entire pipeline disinfection will be monitored by the Employer's Agent Representative and/or the Employer's personnel. The disinfection criteria are stringent and the Contractor shall keep the pipeline clean throughout the Contract.

The Contractor will be required to submit a detailed method statement for approval by the Employer's Agent. A minimum requirement will be that the method statement deals with the method of dosing and how the dosing rate will be controlled to ensure a uniform distribution throughout the pipeline being disinfected, the chemicals to be used, the anticipated range of dosing rates and equipment to be used, and the name and qualification the Contractor's person supervising the disinfection.

Once a successful hydraulic test of the entire pipeline has been achieved and the connections have been completed, the pipeline shall be drained. The pipeline shall

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then be re-charged in accordance with PSL 7.3.4 – “Initial Filling of the Pipeline”. Whilst being charged, a sodium hypochlorite solution shall be dosed at a temporary connection(s) made at an air valve(s), which will be confirmed by the Employer’s Agent in order to achieve a theoretical total chlorine concentration of 25 ppm (mg/l).

Once the entire pipeline has been filled in this manner, it shall be left for a 24-hour period. Thereafter, total chlorine concentrations shall be measured at each scour point. A concentration of 20ppm total chlorine will be considered acceptable. Should this concentration not be achieved at all scours, the Contractor shall take all steps considered necessary by the Employer’s Agent to achieve satisfactory disinfection, at his/her own cost.

Once satisfactory disinfection has been achieved, the pipeline shall be drained via the scour valves (or by other means approved by the Employer’s Agent) and sufficient sodium thiosulphate (typically 1 part of total chlorine) shall be dosed into the scour-wet wells to fully neutralise the chlorine before discharging to watercourse.

The pipeline shall then be re-charged in accordance with the stated procedure and, after 24 hours, samples shall be taken and sent to an approved laboratory for analysis (at no cost to the Employer). Should the following limits not be achieved, the Contractor shall carry out at his/her own cost, all steps deemed necessary by the Employer’s Agent to achieve satisfactory disinfection."

Water Quality Limits:

PARAMETER	COUNT
<i>e. coli</i>	0
Coliforms	0
Faecal Streptococci	0

PSL 6 TOLERANCES**PSL6.3 ALIGNMENT (PLAN AND LEVEL)**

Delete the third and fourth line and substitute:

“of the pipeline, shall be + 50 mm + 10% and the permissible deviation per pipe length shall be +/- 20 mm.”

Delete the sixth (last) line and substitute:

“+ 25 mm + 5% provided that there shall be no reversal of the pipeline gradient.”

PSL 7 TESTING

PSL 7.3 STANDARD HYDRAULIC PIPE TEST

Add the following preamble:

"Water used for one filling of the pipeline for hydraulic testing, one filling for disinfection and one filling after draining the disinfection water will be provided by the Employer free of charge. Additional water used due to dirty water in the pipe and/or due to unsuccessful hydraulic tests will be charged at the Employer's bulk rate per kilolitre that is charged to their bulk consumers. Filling of the pipeline for hydraulic testing shall be carried out slowly to enable air to escape and under the direction of the Employer's Agent.

Items have been provided in the Bills of Quantities to cover the costs of obtaining the water and conveying water from the supply point to the test section of pipeline.

Water can only be supplied to the Contractor at the New Regional Water Treatment Works under construction to the north of the Phongolo River (co-ordinates: 27° 25' south; 22° 05' 30" east). The due commissioning date for the Works has been notified to be March 2016.

PSL 7.3.1 Test Pressure and Time of Test

Add to the Sub-clause:

Pipeline sections shall be subjected to field test pressures as shown on the drawings.

The sections in which the pipeline may be tested will be at the discretion of the Contractor, except that the pipeline shall be tested in sections not exceeding a maximum allowable length of 2 000 m unless otherwise agreed by the Employer's Agent. The Contractor shall make due allowance in the construction programme and in the tendered rates for the entire testing operation including for the provision of temporary end stops (flanges or bullnoses) and any other costs incurred associated with testing the pipeline in intermediate sections. Once all intermediate sections have been successfully tested, the untested sections, if any, between the ends of the tested sections shall be visually inspected under working pressure.

The pipe shall not be tested until the associated structural concrete for anchorage has cured for 28 days or until such concrete has attained the specified design strength. Once filled, the pipe shall be left for 24 hours to permit maximum saturation of cement mortar linings.

The section to be tested shall be pressurised to the specified pressure and left for 24 hours, during which period, the pressure drop (if any) and the quantity of water required to be pumped in to restore the test pressure shall be measured and recorded. In addition, all flexible and flanged joints shall be visually inspected and there shall be no sign of leakage.

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The permissible leakage for welded and flanged steel pipelines is zero (0) litres.

At all times when there is water in the pipeline, and particularly during filling, testing and draining of the pipeline, all air valves shall be in operation and their individual isolating valves shall be open."

PSL 7.3.1.2 Delete the Sub-Clauses 7.3.1.2**PSL 7.3.1.3 Delete the Sub-Clauses 7.3.1.3****PSL 7.3.1.4 Delete the Sub-Clauses 7.3.1.4****7.3.1.4****PSL 7.3.3 Permissible Leakage Rates (Sub-Clause 7.3.3)**

Delete the title of Sub-Clause and substitute the following:

Permissible Make-up Water

Add additional paragraph to the Sub-Clause as follows:

"c) Welded steel pipelines Nil"

PSL 7.3.4 Initial Filling of Pipeline (New Sub-Clause)

Add new Sub-Clause:

"The entire process for filling the pipeline at any time during testing or disinfection shall be carried out under the supervision of the Employer's Agent and will also be monitored by the Employer's Agent and/or the Employer's personnel. Under no circumstances will the Contractor be allowed to carry out filling of the pipeline without the supervision of the Employer's Agent, neither shall he/she permit any other persons to carry out such filling without the written permission of the Employer's Agent.

Any damage to the pipeline caused by non-compliance with this Sub-Clause shall be rectified at the Contractor's expense."

PSL 7.3.5 Connections after Testing (New Sub-Clause)

Add new Sub-clause:

"The connections of the new pipework to the existing pipework shall only be carried out after the pipeline testing has been completed and accepted by the Employer's Agent. For this reason, testing must be carried out against a blank flange or bullnose end cap at these locations."

PSL 7.3.6 Remedial Measures (New Sub-Clause)

Add new Sub-clause:

"In the event that a pipe section fails a test, the Contractor shall carry out all remedial measures necessary to obtain a successful test of each individual section and the entire pipeline, at his/her own expense. Such remedial measures shall in no way compromise the original pipeline specifications."

PSL 7.3.7 Draining of the Pipeline (New Sub-Clause)

Add new Sub-clause:

"The pipeline may have to be drained to carry out remedial measures and it must be drained before the disinfection process commences. The pipeline shall be drained via the scour valves in a manner that does not cause erosion of the streambeds or negatively impact on the environment in any way. All such drainage of the pipeline shall be carried out under the supervision of the Employer's Agent's Representative."

PSL 7.6 Commissioning (New Sub-Clause)

Add new Sub-clause:

"The pipeline will be considered to have been commissioned and practically complete once all the associated structures are sufficiently complete to carry out their structural and hydraulic function and the hydraulic test and disinfection of the entire pipeline has been successfully completed."

PSL 7.7 Water Tightness Test for Chambers (New Sub-Clause)

Add new Sub-clause:

"On completion of each concrete valve chamber, and prior to completion of the backfilling around the chamber, a water tightness test shall be undertaken by the Contractor. This shall be carried out by excavating a trench approximately 0,5 m deep around the periphery of the chamber and continuously (for at least 4 hours) maintaining it full of water. Should there be any noticeable leaks into the chamber, the Contractor shall carry out at his/her own expense whatever measures are necessary to waterproof the chamber to the Employer's Agent's satisfaction."

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.2.1 Collect from pipe yard, Lay and Bed Pipes Fittings, Specials and Couplings

Delete the sub-clause and substitute:

"Collect from pipe yard pipes, transport, lay, and bed pipes completeUnit: m or No

Collect from pipe yard pipes, transport, fabricate, install pipes, bends, fittings, valves, etc. Unit:

Either per metre or 'extra over' the linear metre rate, or by number as scheduled in the Bills of Quantities.

The rates shall cover the cost of the collection of the pipes from pipe yard and for radiographic and/or hydraulic testing of bends, fittings specials, and installing flanges, couplings, valves and other appurtenances as scheduled, making good the coatings and linings, handling, inspecting, marking bends, fittings and specials with item numbers, transporting, holiday detection testing for coatings of steel pipes, forming joint ("fox") holes in all materials, bedding, laying, welding, jointing, cutting, all testing and disinfecting and where relevant all welding, radiographic and other testing as specified, and the completion of the internal and external corrosion protection (make good) and jointing materials (e.g. nuts, bolts, washers, gaskets, welding rods etc)."

The rates for the supply and installing of valves and specials shall cover the cost of any cutting, trimming, and jointing of pipes required for the installation of valves, bend, fittings in the positions shown on the drawings. Unless specific provision is made in the Bills of Quantities, no separate payment will be made for forming of any additional joints and/or for the supply of additional jointing materials which may be required for the connection of cut pipes.

A maximum payment of 80 % of the tendered rates will be made for a completed section of pipeline which has not yet been hydraulically pressure tested and disinfected. A further payment of 20% of the tendered rates will be made upon successful completion of the pressure testing and disinfection for the relevant section of pipeline.

The rates tendered for the laying and bedding of pipes, bends, fittings, and valves, shall be deemed to exclude the costs associated with the field pressure testing and disinfection of the pipeline. Separate items have been included in the Bills of Quantities for the cost associated with the conveyance of water required for testing, pressure testing, and disinfection of the pipeline."

PSL 8.2.15 Special Wrapping in Corrosive Soil

Delete the heading and substitute: **"Corrosion Protection**
Unit:..."

Add new Item:

"The costs of making good the internal linings and external coatings on all butt welded and fillet welded joints on the pipeline are to be included in the tendered rates for pipelaying."

PSL 8.2.16 Mitre Cut Joints (New Item)

Add new Item:

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"Mitre cuts (two piece bends) up to 10° in steel pipelines may be carried out in the field only if ordered by the Employer's Agent.

Mitre Cut Joints
Unit: No

The rate shall cover the cost of cutting, forming, and bevelling the ends of the pipes at the joint, all welding, testing and forming joint holes in all materials and for completion of the internal and external corrosion protection at the joints."

PSL 8.2.17 Cutting Pipes (New Items)

Add new items:

"Extra over for forming scarf
joint.....Unit: No
Extra over for forming mitre cut
joint.....Unit: No
Extra over for cutting pipe as
closure.....Unit: No

Payment will only be made where shown on the drawings or where instructed by the Employer's Agent Representative. No payment will however be made for cutting pipes to suit the installation of bends, fittings, and valves that are shown on the drawings.

The rates shall cover the cost of cutting, forming and bevelling the ends of the pipes at the joint, all welding, testing and forming joint holes in all materials and for completion of the internal and external corrosion protection at the joints."

PSL 8.2.18 Cutting into and Connecting to Existing Pipeline (New Item)

Add new Item:

"Cutting into and connecting to existing pipeline
Unit: Sum

The rate for cutting into and connecting to existing pipelines shall cover the cost of exposing the existing pipeline, making arrangements with the Employer's staff to temporarily shut off the existing pipeline whilst effecting the connection, cleaning and preparing the pipe for cutting, cutting, dealing with all water (including that from possible leaking valves), preparing the pipe ends for jointing, welding / jointing and connecting the new pipework, making good internal linings and external coatings, re-commissioning the pipeline, and including all temporary supports, bedding and backfilling."

PSL 8.2.19 Corrosion Protection of Valves & Flexible and Flanged Joints

Add new Item:

"External corrosion protection to valves, flexible & flanged joints complete as specified in 3.9.3 above

Unit: No

Separate items will be scheduled for each item by pipe nominal diameter.

In the case of valves, the rate shall include for protection of the whole of the valve body, all flanges integral to the valve, the connecting flanges to the valve i.e. including the two flanges of the pipework connected to either side of the valve, and the packing of mastic (without tape or sheathing) over the gland adjusting bolts and nuts."

PSL 8.2.20 Repair of FBMDPE Coatings Defects (New sub-Clause)

Add new sub-clauses:

PSL 8.2.20.1 Repair defect smaller than 650mm²

Repair defects in FBMDPE coatings according to PSL 3.9.3.1 & PSL 3.9.3.12 Unit:
No

PSL 8.2.20.2 Repair defect larger than 650mm²

Repair defects in FBMDPE coatings of size between 651 mm² and 1000 mm² according to PSL 3.9.3.1 & PSL 3.9.3.11 Unit:
No

Repair defects in FBMDPE coatings of size between 1001 mm² and 1500 mm² according to PSL 3.9.3.1 & PSL 3.9.3.11 Unit:
No

PSL 8.2.21 Repair of 3 Layer PE Coatings Defects (New sub-Clause)

Add new sub-clauses:

PSL 8.2.21.1 Repair defect smaller than 650mm²

Repair defects in 3LPE coatings according to PSL 3.9.3.1 & PSL 3.9.3.13 Unit:
No

PSL 8.2.21.2 Repair defect larger than 650mm²

Repair defects in 3LPE coatings of size between 651 mm² and 1000 mm² according to PSL 3.9.3.1 & PSL 3.9.3.13 Unit:
No

Repair defects in 3LPE coatings of size between 1001 mm² and 1500 mm² according to

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 PSL 3.9.3.1 & PSL 3.9.3.13 Unit:
No

PSL 8.2.22 Repair of Cement Mortar Lining Defects (New sub-Clause)
Add new sub-clauses:

PSL 8.2.21.1 Repair lining defect smaller than 200mm²

Repair defects in CML lining according to PSL 3.9.3.1 & PSL 3.9.3.10 Unit:
No

PSL 8.2.21.2 Repair defect larger than 200mm²

Repair defects in CML lining of size between 201 mm² and 400 mm² according to PSL 3.9.3.1
&
PSL 3.9.3.10 Unit: No

Repair defects in CML lining of size between 401 mm² and 800 mm² according to PSL 3.9.3.1
&
PSL 3.9.3.10 Unit: No

PSL 8.2.23 Repair of Damage due to Thermic Welding (New sub-Clause)

Repair defects in pipe coating and lining arising from thermic welding for continuity bonding
according to PSL 3.9.3.14 Unit: No

C3.7.10 PSLB: BEDDING PIPES)
(Applicable to SABS 1200 LB - 1983)

PSLB 2.3 DEFINITIONS

Main fill:

Delete "150mm" in second line and substitute "300mm".

PSLB 3 MATERIALS

PSLB 3.1 Selected Granular Material

Delete the sub-Clause and substitute:

Selected granular material shall be a granular material with a PI not exceeding 6, grading modulus not less than 1,2, free from lumps or stones retained on a 10 mm sieve and having a compactibility factor (as determined by the test given in Section LB of Part 3 of SANS 0120) not exceeding 0,4.

Add to the sub-clause:

Where scheduled and/or shown on the drawings, bedding material (padding) as specified in PSLB 3.3 shall be used in place of selected granular material.

PSLB 3.2 Selected Fill Material

In the first line delete "PI not exceeding 6" and substitute "PI not exceeding 10".

In the second line delete "30mm" and substitute "20mm".

Add to the sub-clause:

Where scheduled and/or shown on the drawings, bedding material (padding) as specified in PSLB 3.3 shall be used in place of selected fill material.

PSLB 3.3 Bedding

The steel and HDPE pipes to be laid under this contract are to be considered as 'flexible' for the purpose of bedding.

Bedding (selected granular and selected fill material) for steel pipes shall be fine sand or fine noncohesive soil, carefully selected, with maximum particle size of 5 mm and which shall not cake nor form lumps when drying. Material complying with the above requirements will also be referred to in this document as "padding".

Samples of bedding sand (padding) shall be submitted by the Contractor to the Employer's Agent for approval well in advance of construction. Only after the Contractor has received written approval from the Employer's Agent, may he/she proceed with placing sand as selected granular material.

No sharp-edged stones shall be allowed to come into contact with the pipes or fittings. Joint holes (pockets) shall be provided in the trench bottom and bedding, at each pipe joint to facilitate welding, and no extra payment will be made for forming or filling the joint holes (pockets) with padding sand.

All "padding" material used for the cradle beneath and surrounding the coated steel pipes shall comply with the following requirements:

GRADING ANALYSIS RANGE	
SIEVE SIZE (mm)	PERCENTAGE PASSING
6,7	98 to 100
4,76	85 to 100
2,36	55 to 95
1,18	30 to 75
0,60	20 to 50
0,425	16 to 38
0,30	13 to 27
0,15	5 to 18
0,075	0 to 12

The material shall be free of organic matter and shall have a compatibility factor of not more than 0.4. The material should be classified as silty to fine sand having a stiffness ratio of not less than 5,0 MPa. Furthermore, the origin of the materials should, preferably, be river transported since it is preferable that the larger grains (3,0 to 4,8 mm in size) be rounded and not sharp and angular.

The Contractor will be required to carry out his/her own quality control testing of the material to ensure that it meets the padding sand requirements and complies with this specification at all times. At least one grading analysis shall be carried out for every 100 lineal metres of bedding placed. The results of these tests shall be forwarded to the Employer's Agent within 24 hours of completion of the test. Should the material not comply with the

specification, the Contractor shall remove and replace it with approved material at his/her own cost.

Depending on the actual material supplied by the Contractor, the moisture content may be critical to enable satisfactory placing and compaction and the Contractor will be deemed to have allowed in his tendered rate for any and all adjustments required to the moisture content of the padding material at all times.

Items have been provided in the Bill of Quantities for the provision of approved bedding sand from approved Commercial or other approved off-site sources for padding sand.

No extra payment will be made for forming or filling joint holes (pockets).

PSLB Selection
3.4

PSLB 3.4.1 Suitable Material available from Trench Excavation

Delete the Sub-Clause and substitute the following:

The excavation of a pipe trench shall comply with the requirements of Sub-Clause 5.4 of SABS 1200 DB and the provisions of Sub-Clause 3.7 of SABS 1200 DB (in terms of which, for the purposes of providing bedding materials, the Contractor is not required to use selective methods of excavating) shall apply. Nevertheless the Contractor shall take every reasonable precaution to avoid burying or contaminating material that is suitable and is required for bedding or covering the pipeline. If, in the opinion of the Employer's Agent, bedding material can be produced from the excavated material, the Contractor shall, if so ordered by the Employer's Agent, screen or otherwise treat (as scheduled) the excavated material in order to produce material suitable for bedding (see also Subclause PSLB 8.2.1).

PSLB 5 CONSTRUCTION

PSLB 5.1.2 Details of Bedding

Delete and replace with:

The pipelines are to be laid on the class of bedding indicated in the Bills of Quantities and/or on the drawings.

PSLB 5.1.2.1 Stone Drainage Layer Beneath Bedding (New Sub-Clause)

Add new Sub-Clause:

Where indicated on the drawings, or as otherwise indicated by the Employer's Agent, a 200 mm thick layer of 19 mm stone shall be placed beneath the bedding layer to act as a drainage channel for excessive groundwater. This layer shall be wrapped in approved geofabric and provided with outlet pipes if and where required or indicated by the Employer's Agent Representative.

PSLB 5.1.4 Compacting

Delete the second line and substitute:

top of the pipeline) shall be 93% mod AASHTO.

Add to Sub-Clause PSLB 5.1.4:

No heavy compaction equipment will be permitted for compaction of any pipe bedding, only pneumatic or hand rammers being acceptable. To this end, and to achieve the 100% compaction specified it is recommended that bedding be brought up evenly on either side of the pipe. The use of complete saturation of the material as a method of achieving the specified compaction may, subject to the Employer's Agent's approval, be used. However, in this regard, contractors are advised that the presence of excessive quantities of water in the pipe trench could lead to flotation of the pipe.

Steps will have to be taken by the Contractor to ensure that flexible pipes do not deform excessively in cross-section during and after construction and backfilling operations. The maximum deflection which will be acceptable at any stage during or after construction is 2% of the pipe diameter horizontally or vertically. The Contractor will be required to provide the necessary apparatus and to monitor deflection during construction.

Pipe deformations will only be maintained within the specified tolerances by correct backfilling practice. No heavy compaction equipment will be permitted for compaction of any pipe bedding, only pneumatic or hand rammers being acceptable. To this end, and to achieve the 93% compaction specified it is required that the bedding material be brought up evenly on either side of the pipe. The use of complete saturation of the material as a method of achieving the specified compaction may, subject to the Employer's Agent's approval, be used. However, in this regard, Tenderers are advised that the presence of excessive quantities of water in the pipe trench could lead to flotation of the pipe.

Prior to the commencement of pipelaying the Contractor will be required to submit, to the Employer's Agent, for his approval, a Method Statement detailing his proposed methods of placing, and compacting methods which he proposes to implement in order to ensure compliance with the specification.

PSLB 5.1.5 Testing (New Sub-Clause)

Flexible joints shall be left exposed with a minimum of 200mm clearance around the bottom of the pipe during hydraulic pressure testing of the pipe to facilitate inspection.

PSLB 5.2 Placing and Compacting of Rigid Pipes**PSLB 5.2.2 Class 'C' Bedding**

Delete the third, fourth and portion of the fifth lines and substitute the following:

The pipes shall be bedded on a layer of compacted granular bedding material on which a 25mm thick layer of uncompacted granular bedding material has been placed and spread. Loose granular bedding material lying next to the pipe shall be placed into the haunch area and compacted with suitable hand tools, and additional selected granular material shall be added and compacted in layers until levels for the bedding cradle as shown on Dwg LB - 1 (c) are reached. The remainder of the bedding i.e. the selected fill blanket, shall be

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placed in layers up the sides of the pipe, each layer being compacted until levels are reached as shown on Dwg LB-1 (c).

PSLB 5.2.5 Stone Bedding (New Sub-Clause)

In areas where waterlogged conditions exist or where ordered by the Employer's Agent, special drains consisting of a 150mm thickness (See PSDB 5.5) of single sized stone with a geofabric filter surround ("Bidim" Grade A4 or similar approved) extending the full width of the trench shall be provided below the bedding to the pipes. The excavation for these drains will be measured in cubic metres at the contract rate applying to unsuitable excavation below the bottom of the trench. The stone filling will be paid for per cubic metre and the geofabric filter will be paid for per square metre. All measurements in this connection will be to a width equal to the base widths and depths ordered.

PSLB 5.3 Placing and Compacting Flexible Pipes**PSLB 5.3(a) Bedding Cradle**

Delete the sub-clause and substitute the following:

The pipes shall be bedded on a minimum 100 mm thick layer of compacted granular bedding material on which a 50 mm thick layer of uncompacted granular bedding material has been placed and spread. Loose granular bedding material lying next to the pipe shall be placed into the haunch area and compacted with suitable hand tools (covered with rubber to prevent damage to the pipe coating), and additional selected granular material shall be added and compacted in layers up to the mid-point of the pipe diameter in the vertical plane. The remainder of the bedding i.e. the selected fill blanket, shall be placed in layers up the sides of the pipe, each layer being compacted until a level of 300 mm above the crown of the pipe is reached.

All bell (fox) holes shall be filled with bedding material.

PSLB 5.3(b) Selected Fill Blanket

Delete "200mm" from title.

PSLB5.4 Concrete Casing to Pipes

Add to the Sub-Clause:

Where concrete casing is ordered by the Employer's Agent it is to be of grade 20/19 concrete with a minimum thickness of 150 mm above the top of the pipe.

PSLB 6 TOLERANCES**PSLB 6.1 Moisture Content and Density**

Add to the Sub-Clause :

The permissible deviations applicable are to be those for Degree of Accuracy II class of work.

PSLB 8 MEASUREMENT AND PAYMENT**PSLB 8.1.3 Volume of Bedding Materials**

Add to the Sub-Clause :

- (c) The volume of bedding material shall be measured net i.e. the volume of the pipe is to be deducted.
- (d) No additional payment will be made for bedding material placed in bell (fox) holes.

PSLB 8.1.5 Disposal of Displaced Material

Delete the Sub-Clause and replace with :

"Material displaced by the pipeline and by imported material from sources other than trench excavation, shall be disposed of by the Contractor at an approved site(s). No haulage shall be paid."

PSLB 8.1.6 Freehaul

Delete the Sub-Clause and replace with:

"All haul will be regarded as free haul. No overhaul will be paid for under this Contract".

PSLB 8.2 SCHEDULED ITEMS

PSLB 8.2.1 Provision of Bedding from Trench Excavation

Delete the Sub-Clause and substitute the following :

PSLB 8.2.1.1 Without the need for screening :

- (a) Selected granular material Unit : m³
- (b) Selected fill material Unit : m³

The rates for (a) and (b) shall cover the cost of acquiring, from any point along the trench excavation, bedding that complies with the relevant requirements of the specification, of delivering it to points alongside the trench spaced to suit the Contractor's methods of working, of making good any backfill deficiency from points where backfill has been acquired, and of disposing of displaced material.

PSLB 8.2.1.2 Including for screening :

- (a) Selected granular material Unit : m³
- (b) Selected fill material Unit : m³

The rates for (a) and (b) shall cover the cost of screening or otherwise treating excavated material, at any point along the trench excavation, in order to produce bedding that complies with the relevant specification, delivering it to points alongside the trench, spaced to suit the Contractor's methods of working, of making good any backfill deficiency there may be from points where screened backfill material has been acquired, and of disposing of displaced material.

PSLB 8.2.2 Supply only of Bedding by Importation

Delete Sub-Clause Clause 8.2.2 and substitute:

Including for screening and/or other treatment :

- (a) Selected granular material Unit :
m³
- (b) Selected fill material Unit : m³

The rates for (a) and (b) shall cover the cost of acquiring, loading, transporting, offloading, screening or otherwise treating excavated material in order to produce bedding that complies with the relevant specification, delivering it to points alongside the trench spaced to suit the Contractor's methods of working and of disposing of displaced material.

NOTE: The rate for the supply and laying of pipelines covers the cost of handling the bedding material from alongside the trench, placing it under the pipeline, forming joint holes and completing the bedding around and over the pipeline.

PSLB 8.2.3 Concrete Bedding Cradle

Add the following paragraph to the Sub-Clause:

"All concrete bedding to pipes will require formwork. The rate for concrete bedding shall include for the supply, installation and stripping of all formwork."

PSLB 8.2.4 Encasing of pipes in Concrete

Delete the fifth and sixth lines and substitute the following :

"encasing the pipe in concrete 150mm thick each side of the pipe and to 150mm above the crown of the pipe including the cost of formwork, (if any), etc. and the cost of formwork to form stopends on either side of collars, couplings, joints etc if instructed by the Employer's Agent and substitute along the length of the pipeline as shown on the drawings or scheduled, or, if instructed by the Employer's Agent, on either side of collars, couplings, joints, etc."

The rate for concrete encasing shall include for the supply, installation and stripping of all formwork."
Unit : m

PSLB 8.2.5 Overhaul of Material for Bedding Cradle and Selected Fill Blanket

Delete the sub-clause.

Add new sub-item:

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**"PSLB
8.2.6** **Drainage Layer (New Sub-Clause)**(a) Stone filling Unit : m²(b) Geofabric filter material (Bidim Grade A4 or similar)Unit : m²

Supply and place beneath pipe, 150mm crushed stone layer as ground water drainage layer. The excavation for these drains will be measured in cubic metres at the tendered rate applying to unsuitable excavation below the bottom of the trench (SABS 1200 DB 8.3.2 c).

The rate for stone filling shall be per cubic metre of stone fill, measured according to a width equal to the base widths and depths ordered.

Supply and installation of geofabric filter material (BIDIM Grade A4 or similar) around stone. The rate shall be per square metre of geofabric to enclose the stone material, measured net according to a width equal to the base widths and depths ordered".

C3.7.11 PSM: ROADS (GENERAL)
(Applicable to SABS 1200 M - 1981)**C3.7.11 PSM : ROADS (GENERAL)**
(Applicable to SABS 1200 M - 1981)**PSM 7 TESTING****PSM 7.2 Process Control**

Add to the subclause:

Any routine testing required of the Contractor in accordance with Clause 7.3 is to be undertaken by an approved independent testing laboratory approved by the Employer's Agent.

PSM 7.3 Routine Inspection and Testing

Add new subclause:

PSM 7.3.4 Routine Inspection and Testing

Routine testing shall be carried out in accordance with TMH1 and at the frequency specified in the relevant standardised specification.

No claims will be allowed in the event of any delay caused by the Contractor failing to provide the results of testing timeously from whatever cause.

C3.7.12 PSMF: BASE
(Applicable to SABS 1200 MF - 1981)

PSMF 3 MATERIALS

PSMF 3.1 Gravel Classification for Excavation Purposes

PSMF 3.1.1 Method of Classifying

Delete the contents of the Subclause and replace with:

"Materials supplied from designated borrow pits shall not be classified."

PSMF 3.3 Physical and Chemical Properties

PSMF 3.3.1 Natural Gravel (Stabilised and Unstabilised)

Delete sub clause (a) and replace with:

(a) " The maximum particle dimension of the gravel shall not exceed 63 mm."

Delete sub clause (e) and replace with:

(e) The UCS after treatment shall be between 1,5 and 3,0 MPa after 7 days at 100% Mod AASHTO density, or between 1,0 and 2,0 MPa after 7 days at 97% Mod AASHTO."

PSMF 5 CONSTRUCTION

PSMF 5.3 Processing

Delete the Subclause and replace with

PSMF 5.3 Chemical Modification

The base material shall be prepared, broken down and spread. Road lime complying with the requirements of SANS 824 shall then be spread over the prepared base material at a rate of 3,0%. The materials shall then be mixed dry using road graders, ploughs and other suitable equipment until the lime is mixed thoroughly and uniformly with the base material. The mixed material shall then be watered, mixed and lightly compacted.

After 24 hours have elapsed the material shall be ripped, worked in the normal manner and compacted to 98% of modified AASHTO density."

PSMF 5.4 Placing and Compaction on a Base Other than a Waterbound Macadam Base

PSMF 5.4.1 Placing

Delete the Subclause and substitute:

"Before construction of the base is commenced, the Contractor shall ensure that:

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-
- (a) the underlying layer on which the base is to be constructed complies with the requirements of the Specification for that layer; and
- (b) the kerbing and channelling shall have been completed and approved by the Employer's Agent.

All cast in-situ mountable kerbing, channelling, vehicle entrances, transitions, etc, shall have been laid for a period of at least 72 hours before construction of the base course is commenced.

Where a nominal thickness exceeding 150 mm has been specified, the base shall be constructed in approximately equal layers not exceeding 150 mm each".

PSMF 5.4.2 Gravel

Delete Subclause (a) and replace with :

- (a) "In the case of natural gravels: 98% of Mod. AASHTO density. In the case of graded crushed stone and graded crushed stone with fines: 84%, 86% or 88% of apparent density as specified or itemised in the Bill of Quantities."."

PSMF 5.4.4 Compaction**PSMF 5.4.4.2** Delete the subclause 5.4.4.2 and replace with:

"In the case of natural gravels compaction shall be to 98% of Modified AASHTO maximum density and in the case of graded crushed stone and graded crushed stone with fines to 86% density, or such other density as may be indicated in the Bill of Quantities."

Add new subclause:

PSMF 5.4.4.3 Thicknesses (New Subclause)

The thicknesses of the layers after compaction shall be the thicknesses shown on the drawings."

PSMF 5.9 TRANSPORT**PSMF 5.9.1 Freehaul**

Add to the subclause:

"All haul from the designated borrow pit shall be regarded as freehaul."

PSMF 8 MEASUREMENT AND PAYMENT**PSMF 8.3 SCHEDULED ITEMS****PSMF 8.3.3 Construct Base with Material from Commercial Sources or Designated Borrow Areas**
Replace the description of the item with the following:**"PSMF 8.3.3 Construct Base Course with Material from Commercial Sources and Compact to 86% of Apparent Density"**

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PSMF 8.3.5 Process Base Material by the Following Processes, as Relevant, and Use in Base

Add the following sub-item:

"(e) Process base material by chemical modification
(applicable to item 8.3.1) Unit:
m³

The tendered rate shall include full compensation for the chemical modification as specified, including all labour, transport, etc. The modifying agent shall be paid for under item PSMF 8.3.8."

PSMF 8.3.8 Stabilizing Agent

Replace the description of the item with the following:

"PSMF 8.3.8 Road lime for modification Unit: t"**PSMF 8.3.9 Overhaul**

Delete the subclause as no payment will be made for overhaul.

C3.8: PARTICULAR SPECIFICATIONS

C3.8.1: PARTICULAR SPECIFICATION: PWA – STEEL TANK

PWA 1 SCOPE

This specification covers the particular requirements relating to the proposed steel tank and structural steel tank stand which is to be erected as part of the scope of works.

PWA 2 DESIGN REQUIREMENTS

The steel tanks and stand (including base plates and holding down bolts) and vertical inlet / outlet pipe and overflow pipe are to be designed and detailed by the Contractor under this Contract. The tank and pipework shall be watertight under all operating conditions and the tank and stand shall be structurally stable. All designs shall accord with the National Building Regulations and, where applicable, the Occupational Health and Safety Act. The tank shall be designed in accordance with SANS 10239 and the stand shall be designed in accordance with the latest editions of SANS 10160 for wind loadings, and SANS 10162 for structural steelwork.

On completion of the designs and drawings and prior to the commencement of manufacture, two copies of the drawings are to be submitted to the Employer's Agent for approval. This submission by the Contractor to the Employer's Agent is to be accompanied by a certificate signed by a registered Professional Engineer accepting responsibility for the design of the tank and stand and advising the Employer's Agent of the design loads which must be used by the Employer's Agent to design the reinforced concrete foundation.

The Employer's Agent will then design and detail the reinforced concrete foundation using the design loads provided by the Contractor and then issue drawings of the reinforced concrete foundation to the Contractor for construction purposes.

After erection of the tank and stand, and prior to handing over to the Employer, the registered Professional Eng who designed the tank and stand shall issue a Certificate of Completion of the Structural System (Form 4 in Annex D in SANS 10400-A after satisfying himself that all fabrication, manufacture and erection has been carried out in accordance with his requirements.

PWA 3 TANK STAND

The base plates of the tank stand are to rest on reinforced concrete pedestals (vertical concrete columns rising from the buried concrete base slab) the tops of which will be approximately 400 mm above natural ground level. The tank stand manufacturer is to supply and deliver to site holding down bolts which the Contractor will cast into the concrete pedestals.

An external ladder fitted with a safety cage shall be supplied and erected to enable access to be gained from ground level to the tank roof. One landing shall be provided.

PWA 4 TANK

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The tank shall have a useable capacity of not less than 500 m³. It is envisaged that standard pressed steel panels will be utilised. All panels shall be adequately braced internally. All sealing compounds shall be odourless, tasteless and non-toxic.

The tank shall be roofed and provided with a vented, hinged and lockable manhole cover and an internal access ladder.

The tank shall also be provided with the following:

- A DN 150 flanged inlet pipe 300 mm long supplied and fitted into the tank floor.
- A DN 150 flanged outlet pipe 300 mm long supplied and fitted into the tank floor.
- A DN 150 flanged drain pipe 300 mm long supplied and fitted into the tank floor.
- A DN 200 "morning glory" type vertical overflow pipe fitted inside the tank with the lip of the bellmouth 20 mm above the operating top water level. This pipe is to terminate in a flange approximately 300 mm below the tank floor.
- A float water level indicator.
- A walkway around the tank, 1000 mm below the top of the tank.

PWA 5 CORROSION PROTECTION

All steelwork is to be hot dipped galvanised to the minimum coating thickness requirements in Table 3 of SANS 121. All nuts, bolts, screws, and threaded articles shall have a zinc coating that complies with the minimum coating thickness requirements of Table 4 of SANS 121. Should it be necessary to cut any steelwork on site or should the galvanised coatings be damaged in any way, the affected components shall be either sent off site for re-hot dip galvanising or the damaged areas coated with zinc rich paint as instructed by the Employer's Agent.

PWA 6 PIPEWORK

All pipework shall be manufactured in accordance with SANS 719 from 4.5 mm mild steel plate and shall be hot dipped galvanised to SANS 121 after fabrication. All inlet pipework is to be flanged with flanges to SANS 1123 Table 2500/3 with bolt holes drilled off-centre. All outlet, drain and overflow pipework is to be flanged with flanges to SANS 1123 Table 1600/3 with bolt holes drilled off-centre.

The pipework to be supplied under this section of the Contract shall comprise:

Inlet, outlet and drain pipe:

- DN 150 double flanged vertical pipes between the flanges 300 mm below tank floor (refer Clause PWA4 above) and flanges at the same elevation as the tank stand base plates.

Overflow pipe:

- DN 200 double flanged vertical pipes between the flange 300 mm below tank floor (refer Clause PWA4 above) and a flange at the same elevation as the tank stand base plates.

The four vertical pipes shall be adequately supported and clamped to the tank stand by means of galvanised mild steel pipe clamps.

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The pipework which is to be connected to the four flanges referred to above (and situated at the same elevation as the tank stand base plates) will be measured under Section D of the Bill of Quantities.

PWA 7 WATERTIGHTNESS TESTING

The tank shall be filled to overflow level and left for 48 hours. Should there be any visible signs of leakage or any drop in the water level (other than that caused by evaporation) the Contractor shall search for and remedy the defects. The elevated tank and stand and pipework will only be deemed to have passed the watertightness test if, after 48 hours, there is no evidence of leakage.

PWA 8 MEASUREMENT AND PAYMENT

Items have been included in the Bill of Quantities to cover the work described in this specification.

PWA 8.1 Design

Detailed design and submission of drawings to the Employer's Agent and obtaining approval thereof.
This item is limited to a maximum of 10% of the total tank costs Unit: Sum

PWA 8.2 Supply

Supply and deliver stand and tank and all appurtenances to site. Unit: Sum

PWA 8.3 Erection

Erection of tank and stand and all appurtenances. Unit: Sum

PWA 8.4 Disinfection

Disinfection of internal surfaces of tank. This item must be not less than 5% of the total tank costs Unit: Sum

PWA 8.5 Testing

Testing tank and pipework for watertightness. This item must be not less than 5% of the total tank costs. Unit: Sum

PWA 8.6 Certificate of Completion

Submission of Certificate of Completion of the Structural System signed by a Registered Professional Engineer all as required in terms of the National Building Regulations. This item must be at least 5% of the total (Section G) tank costs Unit: Sum

C3.8.2: PARTICULAR SPECIFICATION: PAA – DAYWORKS SCHEDULE**Table OF Contents****Page**

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PAA 3	Constructional Plant	C3.157
PAA 4	Materials	C3.157
PAA 5	Measurement and Payment	C3.158

C3.8.3 PARTICULAR SPECIFICATION : PAA - DAYWORKS SCHEDULE**PAA 1 GENERAL**

In cases where the Employer's Agent orders any variation in the form, quality or quantity of the work or any extra work to such an extent that the tendered rates for specific items are no longer applicable, or where a combination of tendered rates cannot be applied to compensate for such work, the Employer's Agent may, in terms of the General Conditions of Contract, order that the amended or extra work be carried out as daywork at the cost of labour, plant and materials. For that purpose provision is made for the Contractor to tender his rates for labour and plant in the Daywork Schedule which forms part of this contract.

No work will be measured as daywork unless:

- (a) the Employer's Agent agrees that the varied work is not in accordance with the specification or scope of a measured item in the contract;
- (b) the Employer's Agent has issued an order in writing for the execution of such varied work; and
- (c) statements of plant and labour are submitted daily to the Employer's Agent for his consideration and approval.

All work valued at the tendered rates in the Daywork Schedule will be subject to contract price adjustment as applicable to the Contract.

PAA 2 SALARIES AND WAGES OF WORKMEN

The amount to be paid for labour will be based on the rates tendered in the Daywork Schedule for the workers executing the work. The tendered rates shall be all-inclusive and shall be held to cover all charges for the Contractor's profits, timekeeping, clerical work, insurance, establishment, superintendence, the use of hand tools, etc, and no additional surcharge over and above the tendered rates will be applicable.

PAA 3 CONSTRUCTIONAL PLANT

The rates for constructional plant as tendered in the Daywork Schedule shall cover all costs, overheads and profit for the contractor and no further surcharge will be payable on the tendered rates. The cost of operators shall be included in the tendered rates except where otherwise specified in Clause PSAA 5 (Measurement and Payment) hereafter.

Where plant or equipment for which no rates exist in the Daywork Schedule are employed, the cost thereof shall be determined as agreed with the Employer's Agent in terms of the General Conditions of Contract. In such case contract price adjustment will only be applicable if the agreed cost is based on rental rates at the time of the base month before closing of tenders, or if the ruling rates current at the time of the execution of the work are de-escalated to the base month.

The Contractor will be paid for the transport to and from the site of constructional plant not on site and specially ordered by the Employer's Agent to be brought on site. No payment will be made for transport of equipment listed in the Contractor's Schedule of Constructional Plant in the tender document, or for equipment which has been removed from the site on request of the Contractor, or for equipment already on site, regardless of whether it appears on the Schedule of Constructional plant or not.

PAA 4 MATERIALS

Materials required for daywork items which cannot be compensated under existing rates and have to be purchased, will be paid for at cost, excluding VAT, plus a surcharge of 15%. The cost of materials provided for daywork at current rates at the time when the work is

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executed, will not be subject to contract price adjustment unless the prices of the materials are de-escalated to the base month for escalation.

PAA 5: MEASUREMENT AND PAYMENT

<u>Item</u>	<u>Unit</u>
PAA 5.1 Labour	
(a) Unskilled workers	/hour (h)
(b) Skilled workers (Artisans)	/hour (h)
(c) Operators and drivers (where measured separately)	/hour (h)
(d) Foremen	/hour (h)
(e) Others (specify)	/hour (h)

The unit of measurement is the hour or part thereof during which workers were engaged in daywork.

The tendered rate shall include full compensation for all salaries, wages, bonuses, pension, insurance, medical aid and other benefits as well as overheads arising from administrative personnel, site agents, supervisors, tools and profit. No surcharge will be paid on the tendered rates

The cost of operators included in the rates for constructional plant, will not be measured again under Labour.

PAA 5.2 Constructional Plant

<u>Item</u>	<u>Unit</u>
(a) Back-acting excavators	
..... (i)..... (Specify type, power and mass)	/hour (h)
..... (ii) etc. (for other back-acting excavators)	/hour (h)
(b) Tractors and drawn rollers and trailers	
..... (i) Tractor (Specify type, power and mass)	/hour (h)
(iii) Tractor with trailer, complete (Specify tractor, and type and capacity of trailer)	/hour (h)
(c) Compactors	

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-
- (i)..... (Specify type and mass)
..... /hour (h)
- (ii) etc. (for other types and masses) /hour (h)
- (d) Compressors
- (i)(Specify capacity and number of tools)
..... /hour (h)
- (ii) etc. (for other compressors and tools) /hour (h)
- (e) Trucks
- (i)(Specify type, and capacity)
..... /hour (h)
- (ii) etc. (for other trucks) /hour (h)
- (f) Light delivery vehicles
- (i)(Specify load capacity)
..... /kilometre (km)
- (ii) etc. (for other)..... /kilometre (km)

PAA 5.3 Cost of materials delivered to site (specify) Provisional sum or as scheduled

The unit of measurement for sub-items 5.2(a) to (e) is the hour or part thereof during which the item of plant had been in active use for the daywork operation, including stopping time of less than five minutes.

Where applicable travel time to and from the normal parking position on site, or the position of the most recent non-daywork activity, as well as stopping time exceeding five minutes shall be multiplied by a factor of 0,6. Time shall be measured by means of a vibrating clock card.

The unit of measurement for sub-item 5.2(f) is the kilometre travelled to collect or transport small quantities of materials. Kilometres travelled in light delivery vehicles by supervisors in the execution of normal supervision duties, shall not be measured for payment.

The tendered rates shall include full compensation for the supply, maintenance, service, repairs, depreciation as well as fuel, lubricants, licensing, insurance, overheads and profit. It shall also include the cost of drivers and operators except in the case of sub-item PAA 5.2(c) and (d) where the operators of tools are paid for under labour.

C3.8.3: PARTICULAR SPECIFICATION: PH – FENCING**C3.8.5 PARTICULAR SPECIFICATION: PH FENCING****PH1 SCOPE**

This specification covers the supply and erection of an Anti-Intruder Fence and is to be read in conjunction with the typical details shown on the drawings.

PH2 MATERIALS, STRENGTHS AND DIMENSIONS**PH2.1 Anti-Intruder Fences**

Anti-Intruder Fences are to be constructed of Razor Mesh fencing and pre-stressed concrete posts.

The fence shall conform to the following details:

Min. overall height above ground level (mm)	2200
Straining and Intermediate Posts:	
1. Min. ht. (mm) 2.	2900
Cross-section [square]	
(a) Straining posts (mm)	100 x 100
(b) Intermediate posts (mm)	75 x 75
3. Design bending moments	
(a) Straining posts (Nm)	1500
(b) Intermediate posts (Nm)	700
Stays	
1. Min. length (mm)	2650
2. Cross-section [square] (mm)	75 x 75
3. Design bending moment (Nm)	450
Razor Mesh (150 mm x 300 mm)	
1. High tensile core (mm)	2,15
2. Min. width (mm)	2400
3. Buried depth (mm)	200
4. Blade thickness	0,5 mm

PH2.1.1 Posts and Stays

All posts and stays shall be capable of withstanding, without signs of cracking, a uniform load imposed over their length (but excluding extension arms) and acting in either main axial plane so as to produce a bending moment at the base of the post of at least that shown above.

All pre-stressing wires shall have a concrete cover of 18 mm (± 3 mm).

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Any out-of-straightness of posts, stays and extension arms shall not exceed 3 mm per metre length of the member.

PH2.1.2 Wire

Straining and tie wire shall be made from mild steel and shall be galvanised to Class "A" (heavy) standards in accordance with SABS 675. The diameter of the straining wire shall be 4,0 mm and of the tie wire 2,0 mm.

PH2.1.3 Gates

Gates shall be made from mild steel tubing which has continuously welded seams. The height of the gate(s) shall be the same as that of the fence and shall coincide approximately with the corresponding sections of fence. The frame shall consist of tubing of bore 50 mm and wall thickness 2,5 mm in the case of main frame members and of bore 25 mm and wall thickness 2,0 mm in the case of bracing members.

PH3 WELDING

The welding shall be such that the profiles of the welds merge smoothly into the adjacent surface of the parent material without excessive overlap. The weld faces shall be reasonably uniform and shall be free from excessive porosity, cavities, and trapped slag. The weld metal, the heat-affected zone, and the adjacent parent metal shall be free from cracks.

PH4 ERECTION**PH4.1 Foundations**

Straining and intermediate posts and associated stays are to be buried to the depths detailed on the drawings. Holes dug in the ground are to be a minimum of 450 mm square for straining posts and intermediate posts.

The material below the concrete shall be well rammed and consolidated and while it is being poured the concrete shall also be well rammed and consolidated.

PH4.2 Posts

Straining posts shall be provided at all corners and other changes in direction, at acute variations in the level of the fence and as supports for gates. On straight lengths of fence straining posts shall be spaced not more than 60 m apart. Intermediate posts and standards shall be spaced not more than 3 m apart.

PH4.3 Stays

Two stays shall be bolted or otherwise attached to each straining post, other than a straining post supporting a gate which shall have one stay. When a stay is bolted to a post a washer shall be placed underneath the nut of the bolt.

The stay(s) shall be positioned behind the mesh and on the line of the fence.

PH4.4 Wires

All straining wires shall be parallel between posts. Each wire shall have one end taken at least twice around a straining post and the other end passed at least twice through the eye of a strain eye bolt attached to the next straining post. The free ends of the wire shall be twisted at least three times around the wire.

The straining wires shall be secured to each intermediate post, standard or dropper by a tie wire and the tie wire shall be secured to the straining wire by at least three complete turns on either side of the post.

PH4.5 Razor Mesh

The razor mesh is to be fixed to the straining wires with tie wires at not more than 375 mm centres. Separate sheets of Razor Mesh are to be overlapped such that the apertures interlock. The mesh is to be joined by binding each aperture in two places with 2 mm diameter galvanised wire.

Any cut edges of the Razor Mesh are to be protected by painting with a zinc chromate or a zinc rich primer.

The Razor Mesh is to be buried to a minimum depth of 200 mm below ground level. The trench is then to be filled with earth or other approved material, well rammed and consolidated.

PH4.6 Gates

Gates shall be so erected that:

- (a) there is a gap of not less than 25 mm and not more than 50 mm between the hinge stile(s) and the straining posts;
- (b) there is a clearance of not less than 50 mm and not more than 75 mm between the bottom horizontal frame member(s) and the ground; and
- (c) when closed there is a space of not more than 15 mm between the closing stile and the straining post in the case of single-leaf gates, and between the closing stiles in the case of double-leaf gates.

Gates shall have no noticeable twist or sag and when closed shall hang parallel to the adjacent posts. Gates shall move freely on their hinges and shall be provided with drop bolts and ground recesses to enable them to be held in open or closed positions.

C4: SITE INFORMATION

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C4: SITE INFORMATION

C4.2

C4.1 GEOTECHNICAL INFORMATION

Tenderers must familiarise themselves with the site of the works and satisfy themselves as to the nature of materials to be excavated under this contract.

Information is provided on the pages following for few trial pits excavated and logged at conception stage of this project are provided for in the section below. The report can be issued to the tenderer on request.

Laboratory Tests

1. Sample NRes1, which is representative of the Msenyeni area, is classified as a fine grained sand with 88% sand content and has negligible plasticity. It exhibits favourable compaction behaviour with a maximum dry density of 1872 kg/m³, low in-situ moisture (9.8%), and a compactibility factor of 0.218. The lack of plasticity (NP) and a low linear shrinkage (LS) value of 0.91% indicate excellent volumetric stability. These properties make it particularly suitable for use in subbase layers, backfill, or other applications where low moisture sensitivity and good drainage are desired.

2. Sample D19.1, classified as a residual silty soil, comprises 66% silt and 10% clay with a plasticity index (PI) of 14%. The dry density (1692 kg/m³) and in-situ moisture (26.7%) suggest that the material holds significant water. While its compactibility factor (0.297) indicates moderate compaction effort, the low expansiveness and plasticity suggest it may perform acceptably in non-structural fill or lightly loaded conditions provided that moisture is well controlled.

3. Sample D32.1 is a clay-rich residual soil with 52% silt and 14% clay. It has a PI of 15% and a dry density of 1589 kg/m³. The medium expansiveness, combined with high silt and clay content, suggests potential for volume change under moisture variation. While compaction is possible (compactibility factor: 0.277), the strength and stability characteristics may be inadequate for direct use in structural fills without treatment.

4. Sample D36.1 is a poorly graded sand with 69% sand and low amounts of clay (6%). It achieved the highest dry density (1969 kg/m³) and showed excellent compaction properties (compactibility factor: 0.213). The absence of plasticity and low moisture sensitivity make this soil ideal for engineered fills and pavement layers.

5. Sample D37.1, a transported silty soil with 61% silt and moderate clay (7%), displays low plasticity (PI = 7%) and acceptable dry density (1692 kg/m³). Its compactibility factor of 0.235 suggests manageable compaction, and its low expansiveness confirms its stability under variable moisture conditions. This material is suitable for controlled fill and potentially for subgrade use with appropriate moisture conditioning.

Tenderers are at liberty to excavate any further trial holes or to carry out other investigations to satisfy themselves as to the nature of the ground that will be encountered in carrying out the Works, provided that they advise the Employer's Agent of their intention to carry out such further trial hole excavations or other investigations so that the necessary safety requirements can be ensured. Any trial hole excavated in areas close to pedestrian or vehicular traffic shall be barricaded and shall be backfilled immediately after inspection of the soil conditions.

The Tenderer shall be fully liable for any claims for losses, damage or injuries whatsoever arising out of, or as a consequence of, carrying out trial hole excavations for the purpose of his tender. Furthermore, the Employer's Agent authority for the carrying out of any exploratory excavations is subject to the Tenderer indemnifying the Employer and the Employer's Agent against any such claims.

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C4.3

C4.2 ATMOSPHERIC/ CLIMATIC INFORMATION

Supply of electricity	400 volt, 50 hertz, 3-phase supply from the Eskom grid (subject to load shedding and other system constraints)
Altitude above sea level	Jozini Town Waterworks 90 m
Ambient temperatures	Maximum : 42°C Minimum : -4°C 24 hour Average Max : 30°C
Maximum relative humidity	100%
Environmental atmosphere	Dusty and corrosive
Lightning	Severe

Extension of time will be considered for abnormal rainfall. The numbers of days per month on which work is expected not to be possible as a result of normal rainfall, and for which the Contractor shall make provision in his tendered rates, prices and programme, are listed in Table C4.2.1 hereafter. Only the number of days lost as a result of adverse weather conditions, exceeding the number of days listed in Table C4.2.1, will qualify for consideration of extension of time.

Table C4.2.1: Expected Number of Working Days Lost per Month due to Normal Rainfall

Month	Expected number of working days lost as result of normal rainfall
January	5
February	5
March	4
April	1
May	1
June	1
July	1
August	1
September	2
October	3
November	4
December	5

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TOTAL	33 days
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(The number of working days lost for December and January exclude the rain days for the builders' holidays from 16 December to 02 January.)

During the execution of the Works, the Employer's Agent Representative will certify a day lost due to abnormal rainfall and adverse weather conditions only:

- if no work was possible on the relevant working day on any item which is on the critical path according to the latest approved construction programme; or
- if less than 30% of the work force and plant on site could work during that specific working day.

Extension of time as a result of abnormal rainfall and adverse weather conditions shall be calculated monthly being equal to the number of working days certified by the Employer's Agent's Representative as lost due to rainfall and adverse weather conditions, less the number of days allowed for as in Table C4.2.1, which could result in a negative figure for certain months. The total extension of time as a result of abnormal climatic conditions, for which the Contractor may apply, shall be the cumulative algebraic sum of the monthly extensions. Should the sum thus obtained be negative, the extension of time shall be taken as nil.

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C4.5

C4.3 ENVIRONMENTAL INFORMATION

The Contractor will be responsible for environmental control on site during construction and the maintenance period. The construction activities will be monitored by an independent environmental specialist (Environmental Control Officer) and will be subject to environmental audits with reference to the Environmental Specification and Environmental Management Programme (EMPr) applicable to the contract.

The Contractor shall be required to rectify all non-conformances with the Environmental Specification and/or Environmental Management Programme (EMPr), as reported by the ECO via the environmental audit reports or by the Employer's Agent Representative in a timely manner. Failure to rectify non-conformances in a timely manner may attract sanctions as set out in this tender document and as determined by statutory authority and regulation.

C4: SITE INFORMATION

C4.6

C4.4 LOCALITY PLAN

C4: SITE INFORMATION

C4.7

C4.5 NAMEBOARD DRAWING

C4: SITE INFORMATION

C4.8

C5: LIST OF TENDER DRAWINGS FOR TENDER PURPOSES