

CONTRACT DOCUMENT

TENDER 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS,

VOLUME 1: RETURNABLE DOCUMENT

NOTE:

- The Form of Offer and Acceptance (C1.1) is on **page 43** of this document
- Table 1: Preference Schedule (B-BBEE contribution) is on **page 166** of this document

15 NOVEMBER 2024

Name of Tenderer	
Address (Physical)	
Contact Person	
Contact Number	
Email Address	

ISSUED BY:



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

Important Notice Regarding Fraudulent Activities

We would like to notify all bidders that there have been recent reports of scammers exploiting our management's information to solicit illegal bribes. It is imperative to note that such actions are unlawful and strictly forbidden. Should you be approached by individuals claiming to represent the Municipality or otherwise attempting to solicit bribes or engage in unethical practices, you are required to report these incidents immediately to the Municipality. Be aware that participation in illegal activities, including bribery, will have severe consequences. Companies involved in such practices, if exposed, will be blacklisted and barred from future participation in the Central Supplier Database (CSD). We urge all applicants to maintain the highest standards of integrity and to cooperate with us to ensure a fair and transparent tendering process. Langeberg Municipality.



TENDER 36/2024

Tenders are hereby requested for the **TENDER 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS**, as specified in the bid document.

Completed Bids, in sealed envelopes, clearly marked **TENDER 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS**, should be placed in the tender box, at the Langeberg Municipal Office, 28 Main Road, Ashton, not later than **12:00 on 15 NOVEMBER 2024** when the Bids will be opened in public. Late, faxed or e-mailed tenders will not be considered.

Tenderers must be registered with the CIDB in a class of construction works and have a grading designation equal to or higher than that determined in accordance with the sum tendered or a value determined in accordance with regulation 25 (7A) of the Construction Industry Development Regulations, 2004. It is estimated that tenderers will need a grading designation of CIDB – 6CE or Higher,

COMPULSORY CLARIFICATION MEETING:

A COMPULSORY CLARIFICATION MEETING WILL BE HELD ON THE 25 OCTOBER 2024 AT - 10H00, AT THE ROBERTSON MUNICIPAL OFFICES, TOWN HALL, 52 CHURCH STREET, ROBERTSON. NO LATE COMERS WILL BE ADMITTED AFTER 10H05.

In order to be considered for a contract in terms of this tender, tenderers must achieve the minimum score for functionality.

For Panel 1 a Maximum of 120 points can be achieved.

For Panel 2: a Maximum of 80 points can be achieved.

For Panel 3: a Maximum of 40 points can be achieved.

The minimum score for functionality is 70 points which is equivalent to 84 out of 120 for Panel 1, 56 out of 80 for Panel 2, and 28 out of 40 for Panel 3. Tenderers will also be required to fulfil the minimum requirements for each construction method, specified in the tables applicable to the respective panel. Tenders that fail to achieve the minimum score for functionality will be declared as non-responsive.

PLEASE NOTE:

The official Bid document must be fully completed in black ink, all pages must be returned and the document should preferably be stapled or bound. Supporting documents must be submitted separately and must be stapled or bound. The lowest, or any tender, will not necessarily be accepted and council reserves the right to accept any tender. Tenders will be evaluated according to the Council's Supply Chain Management Policy and the 80/20 Preference Point system. The Supply Chain Management Policy can be viewed at Municipal Offices or www.langeberg.gov.za

Bid documents are available from **11 OCTOBER 2024**, on the Langeberg Municipal website: www.langeberg.gov.za

Please refer written enquiries to **MR N ALBERTYN** (nalbertyn@langeberg.gov.za).

DP LUBBE

MUNICIPAL MANAGER

Private Bag X2, 6715, Ashton, 6715

GENERAL TENDER INFORMATION

TENDER ADVERTISED : **11 OCTOBER 2024**

**CIDB CONTRACTOR GRADING
DESIGNATION** : **6CE or higher**

CLARIFICATION MEETING : **A Compulsory Clarification Meeting will be held on
25 OCTOBER 2024 at 10h00.**

**VENUE FOR COMPULSORY
CLARIFICATION MEETING** : **A COMPULSORY CLARIFICATION MEETING WILL BE HELD ON THE 25
OCTOBER 2024; AT - 10H00, AT THE ROBERTSON MUNICIPAL OFFICES, TOWN HALL, 52 CHURCH STREET, ROBERTSON. NO LATE COMERS
WILL BE ADMITTED AFTER 10H05.**

CLOSING DATE : **15 NOVEMBER 2024**

CLOSING TIME : **12h00**

CLOSING VENUE : **Tender Box, Municipal Offices, 28 Main Road, Ashton.**

TENDER BOX : Sealed Tenders, with “**TENDER 36/2024: CONSTRUCTION
TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED),
FOR A PERIOD OF THREE (3) YEARS,**”, clearly endorsed on the envelope, must be deposited in the Tender
Box in the Main Entrance, Langeberg Municipal Offices, 28 Main Road, Ashton. The Tender Box is accessible
Monday to Friday from **07h45-16h30 (Monday – Thursday), 07h45-15h15(Friday)**.
Tenders must be accompanied by the completed Tender Document (hardcopy), as well as a USB memory stick
containing a scanned copy of the whole completed Tender Document in pdf format (softcopy) and a whole
completed Schedule of Rates in Excel format (softcopy). Should there be any discrepancy between the tenderer's
hardcopy and softcopies, the hardcopy document shall take precedence. Any contract shall be based on the
tenderer's hardcopy Tender Document. Tenders not accompanied by a complete hardcopy Tender Document,
will not be considered.

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

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T1.1 TENDER NOTICE & INVITATION TO TENDER

TENDER NUMBER: **T36/2024**
DESCRIPTION: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS
CLOSING DATE: **15 NOVEMBER 2024**
CLOSING TIME: 12h00: Bids will be opened in public at 28 Main Road, Ashton
CIDB : **CIDB GRADING DESIGNATION 6CE or higher.**

INFORMATION:

Tender Specifications:

Neil Albertyn
Manager: Project Management
023 626 8200
nalbertyn@langeberg.gov.za

INFORMATION:

SCM Requirements / Specification:

Sabelo Ngcongolo
Manager: Supply Chain Management
023 615 8000
sngcongolo@langeberg.gov.za

Office hours for Langeberg Municipality: 07h45-16h30 (Monday – Thursday), 07h45-15h15(Friday)

A COMPULSORY CLARIFICATION MEETING WILL BE HELD ON THE 25 OCTOBER 2024; AT - 10H00, AT THE ROBERTSON MUNICIPAL OFFICES, TOWN HALL, 52 CHURCH STREET, ROBERTSON. NO LATE COMERS WILL BE ADMITTED AFTER 10H05.

Tenderers must be registered with the Department of Labour (DoL) in accordance with Asbestos Regulations GNR. 155.

Tenders may only be submitted on the Tender documentation issued by Langeberg Municipality and must be valid for **180 days** after tender closing. Late, electronic format, telephonic or faxed Tenders will not be considered and Langeberg Municipality does not bind itself to accept the lowest, part of or any Tender. Printed Schedules of Rates, in the same format (that is, layout, scheduled items, units and quantities, if applicable) as those issued electronically by the Employer upon request, may be submitted as stated in the Tender Data.

Sealed Tenders, with **“TENDER 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS”** clearly endorsed on the envelope, must be deposited in the Tender box at the offices of the Langeberg Municipality, 28 Main Road, Ashton . The Tender box is accessible 07h45-16h30 (Monday – Thursday), 07h45-15h15(Friday). Tenders must be accompanied by the completed Tender Document (hardcopy), as well as a **USB memory stick** containing a **scanned copy of the whole completed Tender Document in pdf format (softcopy) and a whole completed Schedule of Rates in Excel format (softcopy)**. Should there be any discrepancy between the tenderer's hardcopy and softcopies, the hardcopy document shall take precedence. Any contract shall be based on the tenderer's hardcopy Tender Document. Tenders not accompanied by a complete hardcopy Tender Document, will not be considered.

NOTE: This tender will be evaluated in terms of the General Conditions of Contract, Supply Chain Management Policy and relevant specification as depicted in the document

The preferential points system applied is as follows: 80/20 in terms of the approved policy.

Price	80
B-BBEE status level of contribution	10
Locality	10
Total points for Price, B-BBEE and locality	100

The following conditions to Tender exist (failure to comply may result in your Tender being disqualified):

1. This Tender is subject to the General Conditions of Contract for Construction Works, Third Edition, 2015, prepared by the South African Institution of Civil Engineering (SAICE).;
2. Tender data and relevant terms of reference;
3. Tenderers must be registered on the Central supplier database (CSD) if they wish to conduct business

- with the municipality;
- 4 No award will be made to tenderers whose tax status is non-compliant;
- 5 Tenders submitted must be in a sealed envelope clearly marked with the Tender number, placed in the tender box before closing time. Failure will result in the tender being invalid;

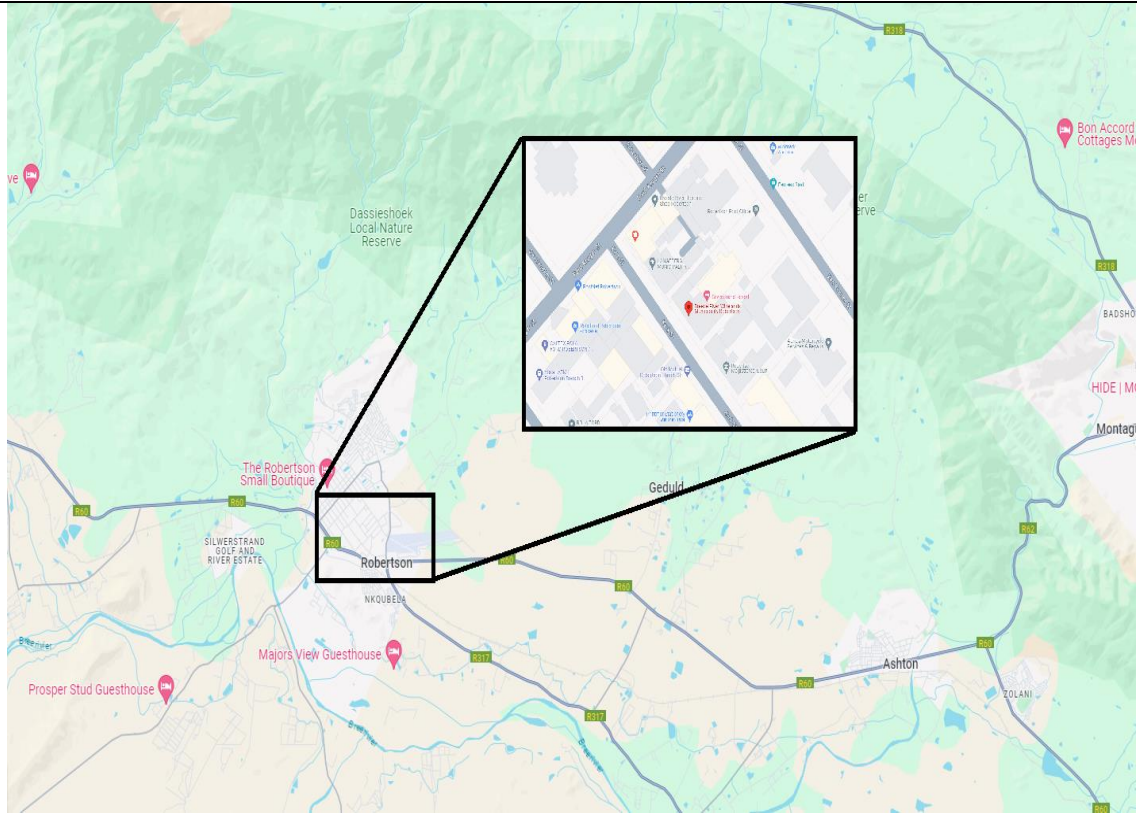
POPIA

By submitting a tender to the Langeberg Municipality, (and by concluding any ensuing related agreement with the Langeberg Municipality, if applicable), the Tenderer thereby acknowledges and unconditionally agrees:

- 1.1. that the tenderer has been informed of the purpose of the collection and processing of its personal information; the avoidance of doubt is for, and in relation to, the tender process and the negotiation, conclusion, performance and enforcement of the ensuing agreement, if applicable, as well as for the Langeberg Municipality's reporting purposes;
- 1.2 to the collection and processing of the tenderer's personal information by the Langeberg Municipality and agrees to make available to the Langeberg Municipality, all information reasonably required by the Langeberg Municipality for the above purposes;
- 1.3 that the personal information the Langeberg Municipality collects from the tenderer or about the tenderer may be further processed for other activities and/or purposes which are lawful, reasonable, relevant and not excessive in relation to the purposes set out above, for which it was originally collected;
- 1.4 that, the tenderer indemnifies the Langeberg Municipality and its officials, employees, and directors and undertakes to keep the Langeberg Municipality and its officials, employees, and directors harmless from any claim or nature which may be made against the Langeberg Municipality (including the costs incurred in defending or contesting any such claim) in relation to the tenderer or the tenderer's employees', representatives' and/or sub-contractors' non-compliance with POPIA and/or the Langeberg Municipality's failure to obtain the tenderer's consent or to notify the tenderer of the reason for the processing of the tenderer's personal information;
- 1.5 to the disclosure of the tenderer's personal information by the Langeberg Municipality to any third party, where the Langeberg Municipality has a legal or contractual obligation to disclose such personal information;
- 1.6 that, under POPIA, the tenderer may request to access, confirm, request the correction, destruction, or deletion of, or request a description of, personal information held by the Langeberg Municipality in relation to you, subject to applicable law; and
- 1.7 that under POPIA, subject to applicable law, the tenderer also has the right to be notified of a personal information breach and the right to object to, or restrict, the Langeberg Municipality's processing of its personal information.

Tender documents, in English, are available free of charge on the website: www.langeberg.gov.za.

MR DP LUBBE
MUNICIPAL MANAGER
Private Bag X2
Ashton
6715



**LANGEBERG MUNICIPALITY
INFRASTRUCTURE SERVICES
CONTRACT NO. T36/2024**

CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

Robertson Town Hall, 52 Church Street, Robertson

LOCALITY PLAN – CLARIFICATION MEETING VENUE

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. B/SM 85/24

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

T1.2 Tender Data

The conditions of tender for the Framework Contract are the Standard Conditions of Tender as contained in Annex F of Board Notice 136 of 2015 in Government Gazette No. 38960 of 10 July 2015, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (see www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to this Tender Data.

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

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

Clause number	Tender Data
---------------	-------------

F.1	General
------------	----------------

F.1.1	Actions
-------	----------------

F.1.1.1	<i>Add the following:</i>
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The Employer is the Langeberg Municipality, represented by the Director: Infrastructure Services.

F.1.1.2	<i>Add the following clauses after the first paragraph:</i>
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The parties agree that this tender, its evaluation and acceptance and any resulting contract shall also be subject to the Employer's Supply Chain Management Policy ('SCM Policy') that was applicable on the date the bid was advertised. Please refer to this document contained on the Employer's website.

Abuse of the supply chain management system is not permitted and may result in the tender being rejected, cancellation of the contract, restriction of the supplier, and/or the exercise by the Employer of any other remedies available to it as described in the SCM Policy.

F.1.2	Tender Documents
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Add the following:

The following documents form part of this tender:

VOLUME 1 : The General Conditions of Contract for Construction Works, Third Edition, 2015, prepared by the South African Institution of Civil Engineering (SAICE). This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.

VOLUME 2 : The SANS Standardised Specifications for Civil Engineering Construction prepared by Standards South Africa. These publications are available and tenderers must obtain copies at their own cost from Standards South Africa, Private Bag X191, PRETORIA, 0001.

Volumes 1 and 2 may also be inspected, by appointment, at the offices of the Employer's Agent during normal office hours.

The tender documents issued by the Employer also comprise of:

VOLUME 3: The Framework Contract Document (this document) in which is bound:

The Tender

Part T1: Tendering procedures

T1.1 Tender notice and invitation to tender

T1.2 Tender data

VOLUME 4: The Framework Contract Document (this document) in which is bound:

Part T2: Returnable Documents

T2.1 List of Returnable Documents

C1.1 Form of Offer and Acceptance

C1.2 Contract Data (data provided by the Contractor)

C2.2 Schedule of Rates

T2.2 Returnable Schedules

VOLUME 5: The Framework Contract Document (this document) in which is bound:

Part C1: Agreements and Contract Data

C1.2 Contract Data (data provided by the Employer)

C1.3 Form of Performance Guarantee

C1.4 Form of Advance Payment Guarantee

C1.5 Occupational Health and Safety Agreement

C1.6 Protection of the Environment Declaration

C1.7 Insurance Broker's Warranty

C1.8 Contract of Temporary Employment as Community Liaison Officer

C1.9 Works Project Acceptance/Refusal Notice

Part C2: Pricing Data

C2.1 Pricing Assumptions

Part C3: Scope of Work

C3.1 Description of the Works

C3.2 Engineering

C3.3 Procurement

C3.4 Construction

C3.5 Management

C3.6 Annexes

Part C4: Site information

C4 Site information

Part C5: Drawings

C5 Drawings List

Annex 6

Example Works Project Contract Document (Panel Type) (this is a separate document to be issued for each Works Project)

Volume 3 and 4 is deemed the "Returnable Document" which must be returned to the Employer in terms of submitting a tender offer.

Volume 5 is deemed the "Returnable Document" which must be returned to the Employer in terms of submitting an offer for a Works Project.

F1.3

Interpretation

F.1.3.2

Delete the clause and replace with the following:

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

Add the following to F.1.3.3:

F1.3.3

g) **framework contract** means the Framework Contract defined in Part C1.2 Contract Data

h) **panel** means Panel defined in Part C1.2 Contract Data

i) **Works Project** means Works Project defined in Part C1.2 Contract Data.

F.1.4

Communication and Employer's Agent

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

Verbal or any other form of communication, from the Employer, its employees, agents or advisors during site visits/clarification meetings or at any other time prior to the award of the Contract, will not

Tender

Part T1: Tendering procedures

Reference No. T36/2024

be regarded as binding on the Employer, unless communicated by the Employer in writing to suppliers by its Manager: Supply Chain Management or his nominee.

The Employer's Agent is:

Name: Mr Neil Albertyn (Manager: Project Management)

Address:

Langeberg Municipality
52 Kerk Street
Robertson
6705
nalbertyn@lanageberg.gov.za

F.1.5 Cancellation and Re-Invitation of Tenders

Delete the full stop at the end of F.1.5.1 c) and replace with, or

Add the following after F.1.5.1 c):

d) there is a material irregularity in the tender process.

F.1.6 Procurement procedures

F.1.6.1 General

Add the following:

For the purposes of this tender, the Employer intends to appoint four (3) Panels:

Panel 1 Water Reticulation,

Panel 2 Sewer Reticulation and

Panel 3 Cured-In-Place-Pipe (CIPP) Lining – Sewers only

for the Framework Contract to replace water and sewer pipelines. Panels 1 and 2 will be used to replace both watermains and sewers. Panel 3 (CIPP) will only be used to line sewers. (Stormwater pipelines may also be replaced using these methods.).

Part C2.1 of the Pricing Data specifies which Schedules of Rates applies to which Panel and the tenderers must indicate in the Form of Tender, which panels they are tendering for.

All responsive and acceptable tenderers will be recommended as successful tenderers. **The Employer reserves the right to appoint however many tenderers to a panel as the Employer deems fit, or not to appoint a panel at all.**

Please refer to F.3.11.1 for way award would be made.

The Contractors, once appointed and subject to operational requirements, will be invited to execute the Works by means of Works Projects. Work allocation will be made in terms of the tender evaluation ranking at "Works Project Stage".

The value of a Works Project can be in the small to large range and even over R10 000 000 but not more than R20 000 000 (including contingencies and VAT, but excluding contract price adjustment, if applicable).

The framework contract period shall be for a period of **36 months**, ending 30 June 2027, as stated in Part C1.2 Contract Data.

This tender is for the entire Langeberg Municipality and the rates submitted in the Schedule(s) of Rates shall constitute the rate for working anywhere within the Langeberg Municipal Area.

F.1.6.2 Competitive negotiation procedure

Add the following to F.1.6.2:

A competitive negotiation procedure will not be followed.

F.1.6.3 Proposal procedure using the two-stage system

Add the following to F.1.6.3:

A two-stage system will not be followed.

Add the following after F.1.6.3.2.2

- F.1.6.4 Objections, complaints, queries and disputes/ Appeals in terms of Section 62 of the Systems Act/ Access to court**
- F.1.6.4.1 Disputes, objections, complaints and queries**
In terms of Regulations 49 and 50 of the Local Government: Municipal Finance Management Act, 56 of 2003 – Municipal Supply Chain Management Regulations (Board Notice 868 of 2005):
- a) Persons aggrieved by decisions or actions taken by the Langeberg Municipality in the implementation of its supply chain management system, may lodge within 21 days of the decision or action, a written objection or complaint or query or dispute against the decision or action.
- F.1.6.4.2 Appeals**
- a) In terms of Section 62 of the Local Government: Municipal Systems Act, 32 of 2000 a person whose rights are affected by a decision taken by the Municipality, may appeal against that decision by giving written notice of the appeal and reasons to the Municipal Manager within 21 days of the date of the notification of the decision.
 - b) An appeal must contain the following:
 - i) Must be in writing
 - ii) It must set out the reasons for the appeal
 - iii) It must state in which way the Appellant's rights were affected by the decision;
 - iv) It must state the remedy sought; and
 - v) It must be accompanied with a copy of the notification advising the person of the decision
- F.1.6.4.3 Right to approach the courts and rights in terms of Promotion of Administrative Justice Act, 3 of 2000 and Promotion of Access to Information Act, 2 of 2000**
The sub- clauses above do not influence any affected person's rights to approach the High Court at any time or its rights in terms of the Promotion of Administrative Justice Act and Promotion of Access to Information Act.
- F.1.6.4.4** All requests referring to sub clauses F.1.6.4.1 and F.1.6.4.2 must be submitted in writing to:
- The Municipal Manager**
Via hand delivery at: 28 Main Road, Ashton
Via post at: Private Bag X2, Ashton
Via email at: mm@langeberg.gov.za
- F.1.6.4.5** All requests referring to clause F.1.6.4.2 3 regarding access to information or reasons must be submitted in writing to:
- The Municipal Manager**
Via hand delivery at: 28 Main Road, Ashton
Via post at: Private Bag X2, Ashton
Via email at: mm@langeberg.gov.za
- F.1.7 National Treasury Web Based Central Supplier Database (CSD) Registration**
Tenderers are required to be registered on the National Treasury Web Based Central Supplier Database (CSD) as a service provider. No tenders will be awarded to a tenderer who is not registered on the Centralised Supplier Database (CSD). In the case of Joint Venture partnerships this requirement will apply individually to each party of the Joint Venture.
- Tenderers who wish to register on the National Treasury Web Based Central Supplier Database (CSD) may do so via the web address <https://secure.csd.gov.za>.
- It is each tenderer's responsibility to keep all the information on the National Treasury Web Based Central Supplier Database (CSD) updated.

F.2 Tenderer's obligations

F.2.1 Eligibility

*Delete the heading **Eligibility** and Replace with **Responsiveness Criteria***

F.2.1.1 *Delete the clause and replace with the following:*

Tenderers must submit a tender offer that complies in all aspects to the conditions as detailed in this document. Only those tenders that comply in all aspects with the tender conditions, specifications, pricing instructions and contract conditions will be declared responsive.

Add the following after F.2.1.2:

F.2.1.3 Only those tender submissions from which it can be established that a clear and unambiguous offer has been made to Employer, by whom the offer has been made and what the offer constitutes, will be declared responsive.

Add the following to F.2.1.1:

F.2.1.4 Only those tenderers who satisfy the following criteria will be declared responsive:

F.2.1.4.1 **Construction Industry Development Board (CIDB) Registration**

Only those tenderers who are registered with an active status with the CIDB, in a contractor grading designation equal to or higher than a **6CE** contractor grading designation, are eligible to have their tenders evaluated.

Joint Ventures are eligible to submit tenders provided that:

- every member of the joint venture is registered with an active status with the CIDB;
- the lead partner has a contractor grading designation of not lower than one level below the required grading designation in the CE class of construction work; and
- the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a **6CE** contractor grading designation.

Notwithstanding the above, tenderers who are capable of being so registered with an active status with the CIDB prior to the evaluation of submissions may be evaluated at the sole discretion of the Employer (the evaluation of tenders takes place when the Employer's Bid Evaluation Committee meets to make a final recommendation to the Bid Adjudication Committee).

For alpha-numeric associated with the contractor Grading Designations see Annex G attached.

F.2.1.4.2 **Compliance with requirements of Langeberg Municipality's SCM Policy and procedures**

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

- A completed **Schedule 1 - Compulsory Enterprise Questionnaire** to be provided (applicable schedule to be completed);
- A completed **Schedule 4 – Authority to sign a bid** to be provided authorising the tender to be made and the signatory to sign the tender on the partnership /joint venture/consortium's behalf (applicable schedule to be completed);
- A copy of the partnership / joint venture / consortium agreement to be provided;
- A completed **Schedule 6 - Declaration of Interest – State Employees** to be provided and which does not indicate any non-compliance with the legal requirements relating to state employees (applicable schedule to be completed);
- A completed **Schedule 5 - Declaration – Declaration of Bidder's past Supply Chain Management Practices** to be provided and which does not indicate any conflict or past practises that renders the tender non-responsive (applicable schedules to be completed);
- A completed **Schedule 2 - Certificate of Independent Tender Determination** to be provided and which does not indicate any non-compliance with the requirements of the schedule (applicable schedule to be completed);
- The tenderer (including any of its directors or members), has not been restricted in terms of abuse of the Supply Chain Management Policy;
- The tenderer's tax matters with SARS are in order;
- The tenderer is not an advisor or consultant contracted with the Employer whose prior or current obligations creates any conflict of interest or unfair advantage;
- The tenderer is not a person, advisor, corporate entity or a director of such corporate entity, involved with the bid specification committee.
- A complete Authorization for the Deduction of Outstanding Amount Owed to the Langeberg Municipality to be provided and which does not indicate any details that renders the tender non-responsive based on the conditions contained thereon (applicable schedules to be completed);
- The tenderer (including any of its directors or members), has not been found guilty of contravening the Competition Act 89 of 1998, as amended from time to time;
- The tenderer (including any of its directors or members), has not been found guilty on any other

basis listed in the SCM Policy.

F.2.1.4.3 Minimum score for functionality

In order to be considered for a contract in terms of this tender, tenderers must achieve the minimum score for functionality as stated below.

The description of the functionality criteria and the maximum possible score for each is shown in the table below. The score achieved for functionality will be the sum of the scores achieved, in the evaluation process, for the individual criteria. A more detailed explanation of the functionality criteria is given below:

Functionality Criteria	Functionality Area	Point Allocation	Max Weighting
CRITERIA 1: Tendering Company has experience in the rehabilitation works associated with the relevant panel			
PANEL 1: Water Reticulation The Tenderer must have completed potable water reticulation pipe rehabilitation projects of a similar nature (Refer to Schedule 12)	Conventional Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through pipe bursting methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
	Sliplining Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through Sliplining methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
PANEL 2: Sewer Reticulation The Tenderer must have completed sewer reticulation pipe rehabilitation projects of a similar nature (Refer to Schedule 12)	Conventional Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
PANEL 3: Cured-in-Place-Pipe The Tenderer must have completed pipe rehabilitation by CIPP methods. (Refer Schedule 12)	Indicate previous project experience in the rehabilitation of sewer reticulation pipes through CIPP installation methods, equal or greater to 100mm dia. size AND 50m of installation length (minimum of 5 projects)	2 points per project completed	20

CRITERIA 2: Tenderer has the following key personnel:			
2.1: Contracts Manager			
PANEL 1: Water Reticulation The Contracts Manager must have completed potable water reticulation pipe rehabilitation projects of a similar nature, (Refer to Schedule 14)	Conventional Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through pipe bursting methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Sliplining Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional Sliplining methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
PANEL 2: Sewer Reticulation The Contracts Manager must have completed sewer reticulation pipe rehabilitation projects of a similar nature. (Refer to Schedule 14)	Conventional Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through pipe bursting methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
PANEL 3: Cured-in-Place-Pipe The Contracts Manager must have completed pipe rehabilitation by CIPP methods. (Refer Schedule 14)	Indicate previous project experience in the rehabilitation of sewer reticulation pipes through CIPP installation methods, equal or greater to 100mm dia. size AND 50m of installation length (minimum of 3 projects)	2 points per project completed	10
2.2: Site Agent/Construction Manager			
PANEL 1: Water Reticulation The Site Agent/Construction Manager must have completed potable water reticulation pipe rehabilitation projects of a similar nature.	Conventional Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10

(Refer to Schedule 14)	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through pipe bursting methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Sliplining Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through Sliplining, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
PANEL 2: Sewer Reticulation The Site Agent/Construction Manager must have completed sewer reticulation pipe rehabilitation projects of a similar nature. (Refer to Schedule 14)	Conventional Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through pipe bursting methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
PANEL 3: Cured-in-Place-Pipe The Site Agent/Construction Manager must have completed pipe rehabilitation by CIPP methods. (Refer Schedule 14)	Indicate previous project experience in the rehabilitation of sewer reticulation pipes through CIPP installation methods, equal or greater to 100mm dia. size AND 50m of installation length (minimum of 3 projects)	2 points per project completed	10

For **Panel 1** a maximum of 120 points can be achieved, for **Panel 2**, a maximum of **80 points** can be achieved for **Panel 3**, a maximum of **40 points** can be achieved. The minimum score for functionality is 70% which is equivalent to **84 out of 120 for Panel 1, 56 out of 80 for Panel 2, and 28 out of 40 for Panel 3**. Tenderers will also be required to fulfil the minimum requirements for each construction method, specified in the table above, applicable to the respective panel. Tenderers that fail to achieve the minimum score for functionality will be declared as non-responsive.

Any one or more of the listed criteria may be applicable on any of the projects listed on Returnable Schedules 12 and 14. All the columns in the schedules should be completed in full to demonstrate the necessary experience as requested to be evaluated for responsiveness. **The Contracts Manager and the Site Agent/Construction Manager cannot be the same person.**

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

Tenderers shall ensure that all relevant information has been submitted with the tender offer in the prescribed format to ensure optimal scoring of functionality points for each Evaluation Criteria.

Company relevant Experience

Panel 1

Companies should demonstrate that they have successfully completed and have verifiable experience in projects relating to the rehabilitation of potable water mains by means of pipe-cracking/bursting, Sliplining **and** construction via conventional open-cut methods, all of which proving a minimum of 110mm dia. pipe size and 300m pipe installation length. **The Tenderer must provide a minimum of 5 verifiable projects completed for each construction method.**

Panel 2

Companies should demonstrate that they have successfully completed and have verifiable experience in projects relating to the rehabilitation of sewer reticulation by means of pipe-cracking/bursting **and** construction via conventional open-cut methods, all of which proving a minimum of 100mm dia. pipe size and 300m pipe installation length. **The Tenderer must provide a minimum of 5 verifiable projects completed for each construction method.**

Panel 3

Companies should demonstrate that they have successfully completed and have verifiable experience in projects relating to the rehabilitation of sewer reticulation by means of CIPP rehabilitation, all of which proving a minimum of 100mm dia. pipe size and 50m pipe installation length. **The Tenderer must provide a minimum of 5 verifiable projects for sewer reticulation projects completed.**

All projects must be listed on Returnable Schedule 12 for the Company experience and Schedule 14 for the key personnel Experience - Contracts Manager and Site Agent/Construction Manager.

Contracts Manager

Panel 1

The Contracts Manager should demonstrate that they have successfully completed, acted as the Contracts Manager and have verifiable experience in projects relating to the rehabilitation of potable water mains by means of pipe-cracking/bursting, Sliplining **and** construction via conventional open-cut methods, all of which proving a minimum of 110mm dia. pipe size and 300m pipe installation length. **A minimum of 3 verifiable projects completed for each construction method is required.**

Panel 2

The Contracts Manager should demonstrate that they have successfully completed, acted as the Contracts Manager and have verifiable experience in projects relating to the rehabilitation of sewer reticulation by means of pipe-cracking/bursting **and** construction via conventional open-cut methods, all of which proving a minimum of 100mm dia. pipe size and 300m pipe installation length. **A minimum of 3 verifiable projects completed for each construction method is required.**

Panel 3

The Contracts Manager should demonstrate that they have successfully completed, acted as the Contracts Manager and have verifiable experience in projects relating to the rehabilitation of sewer **and** water reticulation by means of CIPP rehabilitation, all of which proving a minimum of 100mm dia. pipe size and 50m pipe installation length. **A minimum of 3 verifiable projects completed for of sewer reticulation projects.**

Site Agent/Construction Manager

Panel 1

The Site Agent should demonstrate that they have successfully completed, acted as the Site Agent and have verifiable experience in projects relating to the rehabilitation of potable water mains by means of pipe-cracking/bursting, Sliplining **and** construction via conventional open-cut methods, all of which proving a minimum of 110mm dia. pipe size and 300m pipe installation length. **A minimum of 3 verifiable projects completed for each construction method is required.**

Panel 2

The Site Agent should demonstrate that they have successfully completed, acted as the Site Agent and have verifiable experience in projects relating to the rehabilitation of sewer reticulation by means of pipe-cracking/bursting **and** construction via conventional open-cut methods, all of which proving a minimum of 100mm dia. pipe size and 300m pipe installation length. **A minimum of 3 verifiable projects completed for each construction method is required.**

Panel 3

The Site Agent should demonstrate that they have successfully completed, acted as the Site Agent and have verifiable experience in projects relating to the rehabilitation of sewer **and** water reticulation by means of CIPP rehabilitation, all of which proving a minimum of 100mm dia. pipe size and 50m pipe installation length. **A minimum of 3 verifiable projects completed for sewer reticulation is required.**

All projects of the Contracts Manager and Site Agent must be listed on Returnable Schedule 12.
The **Contracts Manager and the Site Agent cannot be the same person.**

F.2.1.4.4 **Registered Asbestos Contractor with the Department of Labour**

Only those tenderers who are registered with the Department of Labour (DoL) in accordance with Asbestos Regulations GNR. 1196 of 2020 are eligible to have their tender evaluated.

Tenderers will be declared non-responsive if the tenderer has failed to submit either with his/her submission or within 7 days of request proof of registration as an Asbestos Contractor with the Department of Labour (DoL) in accordance with Asbestos Regulations GNR. 1196 of 2020 as specified. Due to the nature of the works and health risk associated as well as the scope of tender, subcontracting to an Asbestos Contractor will not be allowed.

F.2.1.4.5 **Good standing with Bargaining Council**

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

F.2.1.4.6 **Employment of Local Labour**

It is the intention that this Contract should make 100% use of the unskilled local labour force for all non-specialised activities. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel and specialised activities only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The tenderer shall fill in the Returnable Schedule 13 - Key Personnel Register. The data stated on the form will be strictly monitored during the Contract period and any deviations therefrom shall be subject to the prior approval of the Employer's Agent, which approval shall not be unreasonably withheld. Failure to complete the schedule as required will render the tenderer non-responsive.

The employment of local labour is covered in Clause 3.5.2.1.

F.2.1.4.7 **Subcontracting**

A tenderer for a panel (method of construction) may not subcontract, for the same method of construction, to any other tenderer for the same panel.

A tenderer for a panel (method of construction) may not subcontract a tenderer, for the same method of construction, that is a tenderer for the same panel.

A tenderer for a panel (method of construction) may not subcontract a subcontractor, for the same method of construction, that is a subcontractor, for the same method of construction, to any other tenderer for the same panel.

Any tenderers involved in such tendering and subcontracting shall be declared non-responsive.

F.2.1.4.8 **Eligibility of tendering entity**

In order to be considered for one or more of the following Panels in terms of this tender,

- Panel 1 Water Reticulation
- Panel 2 Sewer Reticulation
- Panel 3 Cured-In-Place-Pipe (CIPP) Lining (Sewer Only)

tenderers must be able to satisfy the criteria listed below

F.2.1.4.8.1 **Equipment and other details for trenchless methods**

Tenderers shall own the necessary trenchless installation equipment for Pipe Bursting and/or Cured-In-Place-Pipe (CIPP) Lining trenchless methods. This information shall be listed on Schedule 15 – Schedule of Trenchless Equipment and Details.

The Employer requires the present location of such equipment to be stated so that he may arrange to inspect that equipment.

In addition, a tenderer for Pipe Bursting must provide information on the schedule pertaining to the Butt Welder.

In addition, a tenderer for CIPP must provide information on the Schedule pertaining to the CIPP lining and other details.

The information provided in Schedule 15 will be used to determine if the tenderer has the capability to perform the relevant method(s) of construction. Failure to complete tables as required will render the tenderer non-responsive.

F.2.1.4.8.2 **Relevant experience**

If conformance is not attained in ALL the criteria listed above for a construction method, the tender will be considered ineligible for that panel. Any one or more of the listed criteria is applicable to any of the projects listed on Returnable Schedules 12, 13 and 14. All the columns in the schedules should be completed in full to demonstrate the necessary experience and equipment as requested to be evaluated for responsiveness.

F.2.3 **Check documents**

F.2.3 *Delete the clause and replace with the following:*

The Tenderer should check the tender documents on receipt for completeness, missing or duplicated pages, indistinct figures or writing and any obvious errors. The Tenderer must notify the Employer's Agent at once of any such problems identified

F.2.7 **Clarification meeting**

Add the following:

The arrangements for the site visit/clarification meeting are as stated on the General Tender Information page and in the Responsiveness Criteria (if applicable).

Tenderers should be represented at the site visit/clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved.

Tenderers who fail to attend the compulsory site visit/clarification meeting will be regarded as non-compliant. In the event of a Joint Venture, one of each company must attend the site visit/clarification meeting.

F.2.8 **Seek Clarification**

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

Request clarification of the tender documents, if necessary, by notifying the employer at least **7 calendar days** before the closing date stated in the tender data.

Add the following after the first sentence:

The tenderer warrants that it has:

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

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

F.2.10 **Pricing the tender offer**

Add the following at the end of F.2.10.2:

F.2.10.2 (only applicable in respect of Works Projects).

Add the following new sub-clause after F.2.10.4:

- F.2.10.5 **Provide rates for the items specified in Part C2.2 Schedules of Rates. If a nil rate (i.e. “nil” or “0.00”) is entered against an item, it will be considered that there is no charge for that item.**
- If a rate is not provided for any item in the Schedules of Rates, such item will be regarded as having a nil rate.**
- Part C2.1 of the Pricing Data specifies which Schedules of Rates applies to which Panel and the tenderers must indicate in the Form of Tender, which panels they are tendering for.**
- Tenderers shall provide rates for each item specified in the respective Schedules.**
- If the respective Schedules are not properly and fully completed, the tender will be rejected.**
- No unauthorized amendment shall be made to the Schedules of Rates or any part of the Pricing Data. If such amendment is made, the tender will be rejected.**
- The tenderer may be requested by the Employer to clarify nil rates or items regarded as having nil rates. The Employer may also perform a risk analysis in respect of such rates in accordance with F.3.11.10.
- The rates shall also be used to evaluate tender offers in accordance with F.3.11.
- F.2.10.6 *Add the following new sub-clause after F.2.10.5:*
The tenderer may provide information in Schedule 22 – Price Basis for Imported Resources, to enable adjustments to be made to the cost of imported Cured-In-Place-Pipe liners due to exchange rate fluctuations described in Contract Data Clause 6.8.5.
- F.2.12 **Alternative tender offers**
Delete clauses F.2.12.1, F.2.12.2 and F.2.12.3 and replace with the following:
- F.2.12.1 Alternative rates/tender offers will not be considered.
- F.2.13 **Submitting a tender offer**
Add the following to F.2.13.1 at the end of the first sentence 1:
- F.2.13.1 Where the tendering entity is a joint venture it is recommended that the standard CIDB Joint Venture Agreement be used.
- F.2.13.2 *Delete the clause and replace with the following:*
Return all returnable documents to the employer after completing them in their entirety by writing legibly in non-erasable ink. Tenders must be accompanied by the completed Tender Document (hardcopy), as well as a USB memory stick containing a scanned copy of the whole completed Tender Document in pdf format (softcopy) and a whole completed Schedule of Rates in Excel format (softcopy). Should there be any discrepancy between the tenderer's hardcopy and softcopies, the hardcopy document shall take precedence. Any contract shall be based on the tenderer's hardcopy Tender Document. Tenders not accompanied by a complete hardcopy Tender Document, will not be considered.
- F.2.13.3 *Add the following to F.2.13.3 at the end of the first sentence:*
Parts of each tender offer communicated on paper shall be submitted as an original, plus 0 (nought) copies.
- F.2.13.5 *Add the following to F.2.13.5 at the end of the first sentence:*
The tender submission details are all described on the General Tender Information page.
- F.2.13.6 *Add the following to F.2.13.6:*
A two-envelope procedure will **not** be followed (F.3.5).
- F.2.13.10 *Add the following sub-clause after F.2.13.9:*
By signing the offer part of C1.1 Form of Offer and Acceptance the tenderer declares that all information provided in the tender submission is true and correct.
- F.2.15 **Closing time**
Add the following to F.2.15.1 after the first sentence:
- F.2.15.1 The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
- F.2.16 **Tender offer validity**
Add the following to F.2.16.1 after the first sentence:
- F.2.16.1 The tender offer validity period is **120 days**.

- F.2.16.2 *Delete the clause and replace with the following:*
Tender offers shall be deemed to remain valid until formal acceptance by the Employer of an offer at any time after the expiry date of the original tender offer validity period, unless the Employer is notified in writing of anything to the contrary, including any further conditions, by the tenderer.
- Any further conditions introduced by the tenderer will be considered at the sole discretion of the Employer.
- F.2.17 **Clarification of tender offer after submission**
Add the following to F.2.17 at the end of the third sentence:
A tender will be rejected as non-responsive if the tenderer fails to provide any clarification or supporting documentation requested by the Employer within the time for submission stated in the Employer's written request for such clarification or documentation.
- F.2.18 **Provide other material**
Delete the following word in F.2.18.1:
- F.2.18.1 notarized
- Add the following to F.2.18.1 at the end of the first paragraph:*
- F.2.18.1 Since the transaction value (estimated combined total of prices for all possible Work Projects which may be allocated to the tenderer/contractor over the entire framework contract period) inclusive of VAT exceeds R 10 million, **Tenderers shall complete Schedule 16 DECLARATION FOR PROCUREMENT ABOVE R10 MILLION:**
- a) audited annual financial statement for the past 3 years, or for the period since establishment if established during the past 3 years, if required by law to prepare annual financial statements for auditing;
 - b) a certificate signed by the tenderer certifying that the tenderer has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days;
 - c) particulars of any contracts awarded to the tenderer by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract;
 - d) a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic.
- Each party to a Consortium/Joint Venture shall submit separate certificates/statements in the above regard.
- F.2.18.3 *Add the following after F.2.18.2:*
Tenderers shall fully cooperate with the Employer's external service provider appointed to perform a due diligence review and risk assessment upon receipt of such written instruction from the Employer.
- Failure to fully cooperate could result in a tender being declared as non-responsive.
- F.2.18.4 **Compliance with Occupational Health and Safety Act, 85 of 1993**
Tenderers are to note the requirements of the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014 issued in terms of Section 43 of the Act. The Tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.
- In addition, the Contractor shall be deemed to have read, noted and fully understood the requirements of the Health and Safety Specification in Part C3.5 and to have allowed for all costs in compliance therewith in the rates tendered.
- In this regard the Tenderer shall submit with his tender or upon request, appended to the schedule titled **Health and Safety Plan** in T2.2 : Returnable Schedules, a draft Health and Safety Plan in respect of the Works in sufficient detail to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act, Regulations and Health and Safety Specification in Part C3.5 Management in the Scope of Work.
- F.2.23 **Certificates**
Add the following:
The tenderer is required to submit the following:
- F.2.23.1 **Evidence of tax compliance**

Tenderers shall be registered with the South African Revenue Service (SARS) and their tax affairs must be in order and they must be tax compliant. In this regard, it is the responsibility of the Tenderer to submit evidence in the form of a valid Tax Clearance Certificate issued by SARS with this tender. The tenderer must also provide its Tax Compliance Status PIN number on the **Compulsory Enterprise Questionnaire**.

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

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

Tenderers are to note that the Employer will not award a contract to a Tenderer whose tax matters are not in order.

F.2.23.2 **Broad-Based Black Economic Empowerment Status Level Documentation**

In order to qualify for preference points, it is the responsibility of the tenderer to submit documentary proof, either as certificates, sworn affidavits or any other requirement prescribed in terms of the B-BBEE Act, of its B-BBEE status level of contribution in accordance with the applicable Codes of good practise as issued by the Department of Trade and Industry with the tender submission.

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

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

The applicable code for this tender is the **Amended Codes for Measuring Broad-Based Black Economic Empowerment in the Construction Sector** unless in possession of a valid certificate in terms of the transitional arrangements contained in these Codes.

The tenderer shall indicate in Section 4 of the **Preference Schedule** the Level of Contribution in respect of the enterprise status or structure of the tendering entity (the supplier).

The Tenderer's B-BBEE status as at the closing date for submission of framework tender offers will be used for determining preference points for the full duration of the term tender.

Add the follow new clause after F.2.23.2

F.2.24 **Proposed Deviations and Qualifications**

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

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

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

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

F.3.1.1 *Delete the clause and replace with the following:*

Unless otherwise stated in the Tender Data, respond to a request for clarification received up to 7 calendar days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.3.2 **Issue Addenda**

Delete the first sentence and replace with:

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

Add the following to F.3.2:

Notwithstanding any requests for confirmation of receipt of Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile or registered post.

F3.4 Opening of tender submissions

Add the following to F.3.4.2 at the end of the paragraph:

The location for opening of the tender offers is the tender submission office at the address as stated on the General Tender Information page.

F.3.8 Test for responsiveness

F.3.8.2 Delete par F.3.8.2 (c)

Replace the final sentence of F.3.8.2 with the following:

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

Add the following after clause F.3.8.2

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

F.3.9 Arithmetical errors, omissions and discrepancies

Delete clause F.3.9 in its entirety and replace with the following:

F.3.9 Corrections to tendered rates

In the event of tendered rates being declared by the Employer to be unacceptable to it because they are excessively high, the Tenderer may be required to produce evidence and advance arguments in support of the tendered rates objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates objected to, it reserves the right to negotiate such rates subject to the provisions of F.3.20.

In the event of tendered rates being declared by the Employer to be unacceptable to it because they are excessively low, such rates cannot be amended. In this regard the Employer may then perform a risk analysis in terms of F.3.11.10.

F.3.10 Clarification of a tender offer

Delete the clause and replace with the following:

F3.10 The Employer may, after the closing date, request additional information or clarification from tenderer, in writing on any matter affecting the evaluation of the tender offer or that could give rise to ambiguity in a contract arising from the tender offer, which written request and related response shall not change or affect their competitive position or the substance of their offer. Such request may only be made in writing by the Director: Supply Chain Management using any means as appropriate.

F.3.11 Evaluation of tender offers

Add the following paragraph below the heading:

The preference point system applicable to this tender is either the 80/20 or 90/10 preference point system and the lowest acceptable tender will be used to determine the applicable preference point system. With Works Projects specified to be up to R20m, the 80/20 preference point system for tenders up R50m shall apply.

F.3.11.1 General

Add the following after the first sentence:

General procurement procedures specific to this tender are set out in F.1.6.1.

F.3.11.3(3) Add the following after par F.3.11.3(3):

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

It should be noted that the Deemed B-BBEE Status Level of Contribution from the above tables can be enhanced or discounted in accordance with clauses 4.3 and 5.3 of the **Amended Codes for Measuring Broad-Based Black Economic Empowerment in the Construction Sector**.

F.3.11.3(4) *Delete the heading and replace with the following:*
The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R50 million

F.3.11.3(4)(a)(i) *Delete the first sentence of par F.3.11.3(4)(a)(i) and replace with the following:*

(4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders (including price tender) with a rand value equal to, or above R 30'000 and up to Rand value of R50'000'000 (all applicable taxes included):

Delete the text under the formula and replace with the following:

Where

Ps = Points scored for price of tender or offer under consideration;

Pt = Price of tender or offer under consideration; and

Pmin = Price of lowest acceptable tender or offer.

F.3.11.3(5) *Delete the heading and replace with the following:*
The 90/10 preference point system for acquisition of services, works or goods with a Rand value above R50 million

F.3.11.3(5)(a)(i) *Delete the first sentence of par F.3.11.3(5)(a)(i) and replace with the following:*

(5) (a)(i) The following formula must be used to calculate the points for price in respect of tenders (including price tender) with a rand value above R50'000'000 (all applicable taxes included):

Delete the text under the formula and replace with the following:

Where

Ps = Points scored for price of tender or offer under consideration;

Pt = Price of tender or offer under consideration; and

Pmin = Price of lowest acceptable tender or offer.

F.3.11.7 *Delete the text in the final row of the table and replace with the following:*

P_m is the offer of the most favourable offer.

P is the offer of the tender offer under consideration.

F.3.11.7 **Scoring Price**

Add the following:

The financial offer will be scored using **Formula 2 (Option 1)**.

F.3.11.8 **Scoring Preferences**

Add the following:

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

The terms and conditions of the **Preference Schedule** shall apply in all respects to the tender evaluation process and any subsequent framework or Works Project contracts, provided that the declaration in respect of sub-contractors in the Works Project Acceptance/Refusal Notice (refer to Part C1.8 herein) will supersede declaration 2 in Section 5 of the **Preference Schedule**.

Add the following new sub-clause after F.3.11.9:

F.3.11.10 **Risk Analysis**

Notwithstanding compliance with regard to CIDB registration or any other requirements of the tender, the Employer will perform a risk analysis in respect of the following:

- a) reasonableness of the financial offer
- b) reasonableness of unit rates and prices

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

Delete F.3.13 and replace with the following):

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

- a) *Delete F.3.13 a) and replace with the following):*
is not under restrictions, has any principals who are under restrictions, or is not currently a supplier to whom notice has been served for abuse of the supply chain management system., preventing participation in the employer's procurement,

If an award cannot be made in terms of anything contained herein, the Employer reserves the right to consider the next ranked tenderer(s).

F.3.16 Notice to unsuccessful tenderers

Replace the heading above with:

Notice to successful and unsuccessful tenderers

Delete the clause and replace with the following:

- F.3.16.1 Before accepting the tenders of the successful tenderer(s) the Employer shall notify the successful tenderer(s) in writing of the decision of the Employer's Bid Adjudication Committee to award the tender to the successful tenderers. No rights shall accrue to the successful tenderers in terms of this notice.

Replace sub-clause F.3.16.2 with the following:

- F.3.16.2 The Employer shall, at the same time as notifying the successful tenderer(s) of the Bid Adjudication Committee's decision to award the tender to the successful tenderer(s), also give written notice to the other tenderers informing them that they have been unsuccessful.

F.3.17 Provide copies of the contract

Add the following:

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

Add the following after F.3.19

F.3.20 Negotiations with preferred tenderers

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

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

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

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

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

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

Annex F
(normative)
Standard Conditions of Tender

F.1 General

F.1.1 Actions

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

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

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

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

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

F.1.2 Tender Documents

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

F.1.3 Interpretation

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

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

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

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

- collusive practices intended to establish prices at artificial levels;
- e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body;
- f) **functionality** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

F.1.4 Communication and employer's agent

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

F.1.5 Cancellation and Re-Invitation of Tenders

F1.5.1 An organ of state may, prior to the award of the tender, cancel a tender if-

- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure; or
- (c) no acceptable tenders are received.

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

F.1.6 Procurement procedures

F.1.6.1 General

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

F.1.6.2 Competitive negotiation procedure

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

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

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

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

F.1.6.3 Proposal procedure using the two stage-system

F.1.6.3.1 Option 1

Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of

evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

F.1.6.3.2 Option 2

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

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

F.2 Tenderer's obligations

F.2.1 Eligibility

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

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

F.2.2 Cost of tendering

F2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

F2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

F.2.3 Check documents

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

F.2.4 Confidentiality and copyright of documents

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

F.2.5 Reference documents

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

F.2.6 Acknowledge addenda

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

F.2.7 Clarification meeting

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

F.2.8 Seek clarification

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

F.2.9 Insurance

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

F.2.10 Pricing the tender offer

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

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

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

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

F.2.11 Alterations to documents

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

F.2.12 Alternative tender offers

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

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

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

F.2.13 Submitting a tender offer

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

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

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

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

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

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

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

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

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

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

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

F.2.15 Closing time

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

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

F.2.16 Tender offer validity

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

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

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

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

F.2.17 Clarification of tender offer after submission

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

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

F.2.18 Provide other material

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

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

F.2.19 Inspections, tests and analysis

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

F.2.20 Submit securities, bonds and policies

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

F.2.21 Check final draft

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

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings

F.3.1 Respond to requests from the tenderer

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

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

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

F.3.2 Issue Addenda

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

F.3.3 Return late tender offers

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

F.3.4 Opening of tender submissions

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

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

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

F.3.5 Two-envelope system

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

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

F.3.6 Non-disclosure

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

F.3.7 Grounds for rejection and disqualification

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

F.3.8 Test for responsiveness

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

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

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

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

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

F.3.9 Arithmetical errors, omissions and discrepancies

F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 for:

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

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

- a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.
- b) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
- c) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

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

F.3.10 Clarification of a tender offer

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

F.3.11 Evaluation of tender offers

F.3.11.1 General

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

F.3.11.2 Method 1: Price and Preference

In the case of a price and preference:

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

F.3.11.3 Method 2: Functionality, Price and Preference

In the case of a functionality, price and preference:

- 1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.
- 2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.

- 3) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 5 below.

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R1 million

4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders (including price tender) with a rand value equal to, or above R 30 000 and up to Rand value of R 1 000 000 (all applicable taxes included):

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

Where

P_s = Points scored for comparative price of tender or offer under consideration;

P_t = Comparative price of tender or offer under consideration; and

$P_{\min}$ = Comparative price of lowest acceptable tender or offer.

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

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

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

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

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

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

The 90/ 10 preference points system for acquisition of services, works or goods with a Rand value above R 1 million

(5)(a) The following formula must be used to calculate the points for price in respect of tenders with a Rand value above R1 000 000 (all applicable taxes included):

90/10

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

Where

P_s = Points scored for comparative price of tender or offer under consideration;

P_t = Comparative price of tender or offer under consideration; and

P_{min} = Comparative price of lowest acceptable tender or offer.

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

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

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

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

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

F.3.11.6 Decimal places

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

F.3.11.7 Scoring Price

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

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

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

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

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

F.3.11.8 Scoring preferences

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

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

F.3.11.9 Scoring functionality

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

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

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

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

F.3.12 Insurance provided by the employer

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

F.3.13 Acceptance of tender offer

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

- is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
- has the legal capacity to enter into the contract,
- is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act,

- 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- e) complies with the legal requirements, if any, stated in the tender data, and
 - f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

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

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

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

F.3.15 Complete adjudicator's contract

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

F.3.16 Notice to unsuccessful tenderers

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

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

F.3.17 Provide copies of the contracts

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

F.3.18 Provide written reasons for actions taken

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

F3.19 Transparency in the procurement process

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

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

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

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

- Procurement planning process
- Procurement method and evaluation process
- Contract type

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

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

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

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

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

Annex G

(normative)

Alpha-numerics associated with the Contractor Grading Designations

Table G1: Contractor grading designations and associated parameters

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

Table G2: Classes of construction work

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

Description	Designation	Definition	Work types	Examples
Mechanical engineering works	ME	Construction works that are primarily concerned with the development, extension, installation, removal, alteration, renewal of engineering infrastructure for gas transmission and distribution, solid waste disposal, heating, ventilation and cooling, chemical works, metallurgical works, manufacturing, food processing and, materials handling	Machine systems including those relating to the environment of building interiors. a) gas transmission and distribution systems b) pipelines c) solid waste disposal d) materials handling, lifting machinery, heating, ventilation and cooling, pumps, e) continuous process systems f) chemical works, metallurgical works, manufacturing, food processing such as that in concentrator machinery and apparatus, oil and gas wells, smelters, cyanide plants, acid plants, metallurgical machinery, equipment and apparatus, and works necessary for the beneficiation of metals, minerals, rocks, petroleum and organic substances or other chemical processes.	Air-conditioning and mechanical ventilation Boiler installations and steam distribution Central heating Centralised hot water generation Cranes and hoists Dust and sawdust extraction Compressed air, gas and vacuum installations Conveyor and materials handling installations Continuous process systems involving chemical works, metallurgical works, oil and gas wells, acid plants, metallurgical machinery, equipment and apparatus, and works necessary for the beneficiation of metals, minerals, rocks, petroleum and organic substances and other chemical processes Kitchen equipment Laundry equipment Lift installations and escalators Refrigeration and cold rooms Waste handling systems (including compactors)
Specialist works	SB	A subset of construction works identified and defined by the Board that involves specialist capabilities for its execution	The extension, installation, repair, maintenance or renewal, or removal, of asphalt	
	SC		The development, extension, installation, removal, and dismantling, as relevant, associated with building excavations, shaft sinking and lateral earth support	
	SD		The development, extension, installation, repair, renewal, removal, or alteration of corrosion protection systems (cathodic, anodic and electrolytic)	
	SE		Demolition of buildings and engineering infrastructure and blasting	
	SF		The development, extension, installation, renewal, removal, renovation, alteration or dismantling of fire prevention and protection infrastructure (drencher and sprinkler systems and fire installation)	
	SG		The development, extension, installation, renewal, removal, renovation, alteration or dismantling of glazing, curtain walls and shop fronts	
	SH		The development, extension, installation, maintenance, renewal, removal, alteration or dismantling, as relevant, of landscaping, irrigation and horticultural works	
	SI		The development, extension, installation, repair, maintenance, renewal, removal, renovation, alteration or, dismantling of lifts, escalators, travellers and hoisting machinery	
	SJ		The development, installation, removal, or dismantling, as relevant, of piles and other specialized foundations for buildings and structures	

Description	Designation	Definition	Work types	Examples
	SK	A subset of construction works identified and defined by the Board that involves specialist capabilities for its execution	The installation, renewal, removal, alteration or dismantling, as relevant, road markings and signage	
	SL		The development, extension, installation, renewal, removal, renovation, alteration or dismantling of structural steelwork and scaffolding	
	SM		Timber buildings and structures	
	SN		The extension, installation, repair, maintenance, renewal, removal, renovation or alteration, as relevant, of the waterproofing of basements, roofs and walls using specialist systems.	
	SO		The development, extension, installation, renewal, removal, alteration or dismantling or demolition of water installations and soil and waste water drainage associated with buildings (wet services, plumbing)	
	SQ		The development, extension, installation, repair, removal, alteration, dismantling or demolition of precast concrete or steel fencing	

TENDER NO. T36/2024	 LANGEBERG MUNISIPALITEIT MUNICIPALITY MASIPALA
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CONTRACT DOCUMENT (PANEL TYPE)

FOR THE

TENDER 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS,

Panel Contract Period: expires 30 June 2027

Works Projects: Above R0 up to R20 000 000

VOLUME 4: RETURNABLE DOCUMENTS

Issued by:	Enquiries regarding specifications:	Enquiries about SCM requirements:
Municipal Manager Langeberg Municipality, 28 Main Road Ashton, 6705	Neil Albertyn Manager: Project Management nalbertyn@langeberg.gov.za 023 626 8200	Sabelo Ngcongolo Manager: Supply Chain Management sngcongolo@langeberg.gov.za 023 615 8000

March 2024

Name of Tenderer	
Email Address	
Tel: Number	

Part T2: Returnable Documents

	Pages
T2.1 List of Returnable Documents	42
C1.1 Form of Offer and Acceptance (Agreement).....	43-47
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C2.2 Schedule of Rates	49-95
T2.2 Returnable Schedules	96 – 176

TENDER NO. T36/2024



T2.1 LIST OF RETURNABLE DOCUMENTS

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

- 1. C1.1 The offer portion of the C1.1 Form of Offer and Acceptance**
- 2. C1.2 Contract Data (provided by contractor)**
- 3. C2.2 Schedule of Rates**
- 4. Returnable Schedules that will be incorporated into the Contract**

	Pages
1: COMPULSORY ENTERPRISE QUESTIONNAIRE	97-98
2: CERTIFICATE OF INDEPENDENT TENDER DETERMINATION	99-100
3: CLARRIFICATION/VIRTUAL MEETING CERTIFICATE	101
4: AUTHORITY TO SIGN A BID	102 - 104
5: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (MBD 8)	105-106
6: DECLARATION OF INTEREST – STATE EMPLOYEES (MBD 4)	107-108
7: AUTHORISATION FOR THE DEDUCTION OF OUTSTANDING AMOUNTS OWED TO LANGEBERG MUNICIPALITY	109
8: DECLARATION IN RESPECT OF <u>COMPLIANCE WITH LABOUR LEGISLATION</u>	110
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17: SCHEDULE OF SUBCONTRACTORS	159
18: HEALTH AND SAFETY PLAN	160
19: PROPOSED DEVIATIONS AND QUALIFICATIONS BY TENDERER	161
20: FUNCTIONALITY CRITERIA	162
21: REGIONS OF PREFERENCE (Not applicable)	163
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24: PREFERENCE SCHEDULE (where preferences are granted in respect of B-BBEE contribution and Locality)	166-172
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26: INFORMATION TO BE PROVIDED WITH THE TENDER	174-176

5. Other documents required for tender evaluation purposes

- a) Joint Venture Agreement (if applicable) - append to Schedule 4.
- b) Health and Safety Plan - append to Schedule 18.

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.1 Form of Offer and Acceptance

Offer

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

CONTRACT NO. TENDER 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

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

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

The completed Schedules of Rates (excluding VAT), as contained in Part C2.2 Pricing Data, shall form the tender offer. These rates shall be multiplied, as applicable, by the quantities required in respect of relevant items to develop individual Works Projects to be allocated in accordance with the procedures described in Part C1.2 Contract Data in this Framework Contract document.

The tenderer is tendering for the following panel(s) as specified in Part T1.2 Tender Data Clause F.1.6.1:

Mark with a cross (X)

Panel 1	Water Reticulation	
Panel 2	Sewer Reticulation	
Panel 3	Cured-In-Place-Pipe (CIPP) Lining	

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

Signature(s)
 Name(s)
 Capacity
for the tenderer
 (Name of organization/tenderer)
 (Address of organization/tenderer)

 Name and
 signature
 of witness

Date

.....

Acceptance

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

The terms of the contract are contained in:

- Part C1: Agreements and contract data (which includes this framework agreement)
- Part C2: Pricing data
- Part C3: Scope of work
- Part C4: Site information
- Part C5: Drawings List

in Volumes 3 and 5, together with any drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

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

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

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

This agreement constitutes a framework contract for the purposes of developing individual Works Projects to be allocated in terms of the procedures described in the contract, the region(s) awarded to the contractor in terms of this term tender process being recorded in the schedule of deviations.

Signature(s)

Name(s)

Capacity

for the Employer
LANGEBERG MUNICIPALITY
28 Main Road
Ashton
6705

Name and signature
of witness

Date

Schedule of Deviations

Notes:

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

1 Subject
Details

2 Subject
Details

3 Subject
Details

4 Subject
Details

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

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

Signature(s)

Capacity

(Address of organization/tenderer)

Date

Signature(s)

Capacity

Date

Confirmation of Receipt

The tenderer, (now contractor), identified in the offer part of this agreement hereby confirms receipt from the employer, identified in the acceptance part of this agreement, of one fully completed original copy of this framework agreement, including the schedule of deviations (if any), today:

the.....(day)
of(month)
20.....(year)
at(place)

For the Contractor:

Signature(s)
Name(s)
Capacity

Signature and name of witness:

Signature
Name

LANGEBERG MUNICIPALITY
 INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.2 Contract Data (provided by the Contractor)

Clause 1.1.1.9:

The name of the Contractor is

Clause 1.2.1.2:

The address of the Contractor is

Physical : Postal :
 Address Address

Telephone : Fax:
 email :

CONTRACTOR’S ANNUAL HOLIDAY PERIODS DURING CONSTRUCTION PERIOD

Year 1 contractor’s annual Builders Holiday period	Start date	End date
Year 2 contractor’s annual Builders holiday period	Start date	End date
Year 3 contractor’s annual Builders holiday period	Start date	End date

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C2.2 Schedules of Rates

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SCHEDULE A GENERAL

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SECTION A: PRELIMINARY AND GENERAL (SMALL WORKS)				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SANS 1200 A	PRELIMINARY AND GENERAL (SMALL WORKS)		
	8.3	SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS		
A10	PSA 8.3.1.1	Contractor's general obligations Security (performance guarantee) (Framework contract once off pay item)	Sum	
A20	PSA 8.3.1.2	Insurance (blanket/umbrella policy) (Framework contract annual pay item)	Sum	
A30	8.3.3	General responsibilities and other fixed-charge obligations	Sum	
	8.3.2	Establishment of facilities on the Site		
	8.3.2.2	Facilities for the Contractor		
		a) Offices and storage sheds		
A40	PSA 8.3.2.2	i) Langeberg Municipal Area	Sum	
		e) Ablution and latrine facilities		
A50	PSA 8.3.2.2	i) Langeberg Municipal Area	Sum	
		g) Water supplies, electric power and communications		
A60	PSA 8.3.2.2	i) Langeberg Municipal Area	Sum	
	8.3.4	Removal of Site Establishment		
A70	PSA 8.3.2.2	i) Langeberg Municipal Area	Sum	
A80		Testing carried out by commercial or council laboratory as ordered by Employer's Agent	Prov Sum	R 10 000.00
A90		% Profit and Attendance for item A80	%	
	8.4	SCHEDULED TIME-RELATED ITEMS		
A100	8.4.1	Contractual requirements	day	
	8.4.2	Operation and Maintenance of Facilities on Site, for the duration of the Duration of Construction, except where otherwise stated		
	8.4.2.2	Facilities for the Contractor		
A110		a) Offices and storage sheds	day	
A120		e) Ablution and latrine facilities	day	
A130		g) Water supplies, electric power and communications	day	
	PSA 8.6	PRIME COST SUMS		
		Principal Agent OHSA compliance		
A140		a) Cost of Principal Agent OHSA compliance	Prov Sum	R 40 000.00
A150		b) Charge required by Contractor on item a) above	%	
		Appointment of Client Agent OHSA		
A160		a) Cost of appointing Client Agent OHSA	Prov Sum	R 40 000.00
A170		b) Charge required by Contractor on item a) above	%	
	PSA 8.7	DAYWORKS (As ordered by the Employer's Agent)		
		LABOUR CHARGES		
A180		(a) Labourer semi-skilled	h	
A190		(b) Labourer skilled	h	
A200		(c) Chargehand / Team leader	h	
A210		(d) Foreman	h	
A220		(e) Artisan (NTC 2 qualified)	h	
A230		(f) Artisan utility workman (No qualification)	h	
A240		(g) Plant Operator	h	
A250		(h) Flagperson	h	
A260		(i) Driver	h	
A270		(j) Security guard	h	
A280		(k) Supervisor	h	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
A290		MATERIALS CHARGES		
A300		(a) Actual cost of material (excl. VAT)	Prov Sum	R 10 000.00
		(b) Handling costs in respect of item a270	%	
		PLANT CHARGES (As ordered by the Employer's Agent)		
A310		(a) Backhoe / Digger loader 4x4	h	
A320		(b) Tractor	h	
A330		(c) Trailer (1 ton)	h	
		(d) Tip truck		
A340		(i) Capacity of 6 m3	h	
A350		(ii) Capacity of 10 m3	h	
A360		(e) Walk-behind vibrating roller (1t)	h	
A370		(f) Plate compactor	h	
A380		(g) Water cart (2000 l)	h	
A390		(h) Water cart (9000 l)	h	
A400		(i) Concrete mixer	h	
A410		(k) Flat bed truck (4 ton)	h	
A420		(l) Compressor (16 m3/ min) including 2 x 30 m hoses & 2 x breakers	h	
A430		(m) Excavator (minimum 20 ton)	h	
		(n) Light delivery vehicle		
A440		(1) 0.5 t capacity	h	
A450		(2) 1.0 t capacity	h	
		(o) Pumps		
		Super Silent Selwood Seltorque pumps (or similar approved)		
A460		(i) 75 mm diam	h	
A470		(ii) 100 mm diam	h	
A480		(iii) 150 mm diam	h	
A490		(p) Sludge pump	h	
A500		(q) Rammer compactor	h	
A510		(r) Paving breaker	h	
A520		(s) Jetting machine	h	
A530		(t) Electro fusion machine	h	
A540		(u) Generator 5 kVA with regulator	h	
A550		(v) Generator 25 kVA 3 phase with regulator	h	
A560		(w) 5 ton winch	h	
A570		(x) 10 ton winch	h	
A580		(y) Super sucker	h	
A590		(z) Trailer jet & truck & 5 000 litre tank	h	
A600		(aa) Vacuum tanker 10/11 m3 (5/6 grit & 5 clean)	h	
A610		(bb) Hydraulic power pack (indicate capacity)	h	
		(cc) 2 set bucket machine including buckets and cables		
A620		i) Pipes from 200 mm dia to 400 mm dia	h	
A630		ii) Pipes from 450 mm dia to 800 mm dia	h	
A640		iii) Pipes from 850 mm dia to 1200 mm dia	h	
A650		(dd) Other plant not specified above	Prov Sum	R 5 000.00
A660		(ee) handling costs in respect of item A710	%	
	PSA 8.8	TEMPORARY WORKS		
	PSA 8.8.2	Accommodating traffic and maintaining temporary deviations one and two-way traffic in : (incl. traffic safety officer, flagmen, delineators and all signage)		
A670		(a) Short Term Works	km	
A680		(b) Urban streets - Two-Way lane closure	km	
A690		(c) Urban streets - One-Way traffic accommodated	km	
A700		(d) Urban streets - Lane Closure in and beyond junction	km	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE	
A710	PSA 8.8.3	Watching, lighting and temporary fencing	Sum		
A720		a) Establishment	day		
A730		b) Maintenance cost for:	m/day		
A740		i) Security	day		
		ii) Temporary fencing			
		iii) Lighting			
	PSA 8.8.4	LOCATION AND PROTECTION OF EXISTING SERVICES			
	PSA 8.8.4.1	Provision of Devices for:			
A750		(a) Water and sewer pipes	Sum		
A760		(b) Electrical and other cables	Sum		
A770		(c) Other	Sum		
	PSA 8.8.4.2	Hand excavation necessary for locating and exposing existing services in all materials:			
A780		(a) In all roadways	m ³		
A790		(b) In paved areas	m ³		
A800		(c) In concrete areas	m ³		
A810		(d) In all other areas	m ³		
	PSA 8.8.7	Dealing with water:			
A820		(a) Dealing with subsurface water	Sum		
A830		(b) Dealing with surface water	Sum		
		(c) Extra-over for item (a) above:			
A840		i) Installation of well points	m		
A850		ii) Operate and maintain	day		
	PSA 8.8.8	LIAISON WITH SERVICE AUTHORITIES			
		Wayleave applications			
A860		a) Roads & Stormwater	Sum		
A870		b) Water and Sanitation - Services	Sum		
A880		c) Water and Sanitation - Bulk	Sum		
A890		d) Eskom Electricity	Sum		
A900		e) Langeberg - Electricity Department	Sum		
A910		f) Telkom	Sum		
A920		g) Neotel	Sum		
A930		h) Other	Prov Sum	R	2 000.00
A940		i) Handling costs and profit for item A910	%		
A950		j) Application for use of portion of public open space per Works Project	Prov Sum	R	5 000.00
A960		k) Monthly rental of portion of public open space per Works Project	Prov Sum	R	5 000.00
A970	PSA 8.8.9	Notifications to consumers and residents regarding work and disruptions of service. (Per 30 notices)	Sum		
	8.9	HEALTH AND SAFETY			
A980	PSA 8.9.1	Complying with Health and Safety requirements	Sum		
A990	PSA 8.9.2	Asbestos Specialist Services:			
A1000		(a) Approved Asbestos Inspection Authority (AIA) to assist the contractor with the approval of the asbestos plan of work in accordance with legislation	Prov Sum	R	18 000.00
A1010		(b) Administrative costs and profit in respect of item A1000	%		
A1020		(c) Handling and disposal of asbestos-containing waste from site to the permitted Vissershok landfill site, in accordance with legislation	Sum		
A1030		(d) Transport of asbestos-containing waste at the permitted low-hazard (H:h) landfill site at Vissershok, in accordance with legislation	ton/km		
A1040		(e) Cost of dumping at permitted Vissershok landfill site (Original tipping slips are required for audit purposes)	ton		

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
A1050	PSA 8.10	ENVIRONMENTAL MANAGEMENT		
A1060	PSA 8.11	Complying with Environmental Management requirements	day	
		Noise Exemption Permit per Works Project	Sum	
		COMMUNITY LIAISON OFFICER		
A1070		a) Employment of CLO	day	
A1080		b) Handling costs and profit for item A1050	%	
		CONTRACT NAMEBOARDS		
A1090	PSA 8.12	Nameboards as per detail	Sum	

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SECTION B: SITE CLEARANCE				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SANS 1200 C	SITE CLEARANCE		
		CLEAR AND GRUB		
B10	8.2.1	Clear and grub site (provisional: area to be designated by Employers Agent)	m ²	
B20	8.2.2	Remove and grub trees and tree stumps of girth	No.	
B30		a) over 0,5 m up to and including 1,0 m	No.	
		b) over 1,0 m up to and including 2,0 m	No.	
	PSC 8.2.7	Dismantle and remove		
B40		a) Pipelines		
B50		i) Up to 150 mm diameter	m	
B60		ii) Over 150 mm diameter	m	
B70		b) Sewer structures: Manholes (brick, fibre cement or concrete)	No.	
B80		c) Watermain structures: Valve or Hydrant Chambers (brick, fibre cement or concrete)	No.	
B90		d) Kerbs, Edging and channels	m	
B100		e) Asphalt		
B110		i) Asphalt (0mm to 50 mm thick)	m ²	
B120		ii) Asphalt (Over 50 mm thick)	m ²	
B130		f) Road Signs	No.	
B140		g) Trees and Plants / Shrubs	No.	
B150		h) Grass and lawns	m ²	
B160		i) Concrete in roads, driveways or walkways		
B170		i) Up to 100 mm thick concrete	m ²	
B180		ii) over 100 mm and up to 200 mm thick concrete	m ²	
B190		iii) over 200 mm thick concrete	m ²	
B200		j) Brick Paving in roads, driveways or walkways	m ²	
B210	PSC 8.2.10	Remove topsoil to a nominal depth of 150 mm, stockpile and reinstate	m ³	
B220	PSC 8.2.11	Remove and stockpile material for later reinstatement		
B230		a) Kerbs, edging and channels	m	
B240		b) Brick paved / Interlocking bricks in roads, driveways or walkways	m ²	
B250		c) Grass and lawns	m ²	
B260		d) Trees and Plants / Shrubs	No.	
B270		e) Road Signs	No.	
B280		f) Fence		
B290		i) All wire type fencing	m	
B300		ii) All palisade type fencing	m	
B310		iii) Vibracrete walls	m	
B320	PSC 8.2.12	Saw cutting of existing surfaces		
		a) Asphalt		
		i) Asphalt (0mm to 50 mm thick)	m	
		ii) Asphalt (Over 50 mm thick)	m	
		b) Concrete		
		i) Up to 100 mm thick concrete	m	
		ii) over 100 mm and up to 200 mm thick concrete	m	
		iii) over 200 mm thick concrete	m	
		c) Paving	m	

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SECTION C: EARTHWORKS (PIPE TRENCHES)				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SANS 1200 DB	EARTHWORKS (PIPE TRENCHES)		
		EXCAVATION		
	PSDB 8.3.2 a)	Excavate in all materials for trench excavations: Up to 400 mm diam. for total trench depth:		
C10		a) Exceeding 0,0 m but not exceeding 1,0 m	m ³	
C20		b) Exceeding 1,0 m but not exceeding 2,0 m	m ³	
C30		c) Exceeding 2,0 m but not exceeding 3,0 m	m ³	
C40		d) Exceeding 3,0 m but not exceeding 4,0m	m ³	
C50		e) Exceeding 4,0 m but not exceeding 5,0 m	m ³	
C60		f) Exceeding 5,0 m but not exceeding 6,0 m	m ³	
C70		g) Exceeding 6,0 m but not exceeding 7,0 m	m ³	
C80	PSDB 8.3.2 b)	Bulk excavation for chambers, concrete structures and other underground structures	m ³	
C90	PSDB 8.3.2 c)	Bulk excavation for point repairs, launch, retrieval, and access pits	m ³	
	PSDB 8.3.2 d)	Extra-over items C10 to C90 incl. for (provisional):		
C100		i) Hard rock	m ³	
C110	PSDB 8.3.2 e)	Hand excavation in all materials where ordered by the Employer's Agent	m ³	
C120	PSDB 8.3.2 f)	Excavate and dispose of unsuitable material from trench bottom (Provisional)	m ³	
		EXCAVATION ANCILLARIES		
C130	PSDB 8.3.3.1	Make up deficiency in backfill material (provisional)		
C140	8.3.3.1 a)	From other necessary excavations on site	m ³	
	8.3.3.1 c)	By importation from commercial source (As approved by the Employer's Agent)		
C150		a) Sand	m ³	
C160		b) Up to 37 mm stone any thickness	m ³	
C170	8.3.3.3	Compaction in road reserve	m ³	
	8.3.4	PARTICULAR ITEMS		
	PSDB 8.3.4 Add-1	a) Shoring trenches and pits in all cases for depths:		
C180		i) 1,0 m - 2,0 m	m ²	
C190		ii) 2,0 m - 3,0 m	m ²	
C200		iii) 3,0 m - 4,0 m	m ²	
C210		iv) 4,0 m - 5,0 m	m ²	
C220		v) 5,0 m - 6,0 m	m ²	
C230		vi) 6,0 m - 7,0 m	m ²	
C240		vi) 7,0 m - 8,0 m	m ²	
	8.3.5	PROTECTION OF EXISTING SERVICES		
	8.3.5 a)	Services that intersect a trench (temporary protection)		
C250		a) LV electrical cables	No.	
C260		b) HV electrical cables	No.	
C270		c) House water connections	No.	
C280		d) Water mains	No.	
C290		e) Bulk water mains	No.	
C300		f) Stormwater pipes up to 600 mm diam.	No.	
C310		g) Stormwater pipes over 600 mm diam.	No.	
C320		h) Sewers pipes up to 300 mm diam.	No.	
C330		i) Sewer pipes over 300 mm diam.	No.	
C340		j) Telecommunication cables in ducts	No.	
C350		k) Telecommunication optic fibre cables	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
C360	8.3.5 b)	l) Stormwater channels and kerbs	No.	
		Services that adjoin a trench (temporary protection)		
C370		a) LV electrical cables	m	
C380		b) HV electrical cables	m	
C390		c) Water mains	m	
C400		d) Bulk water mains	m	
C410		e) Stormwater pipes up to 600 mm diam.	m	
C420		f) Stormwater pipes over 600 mm diam.	m	
C430		g) Sewers pipes up to 300 mm diam.	m	
C440		h) Sewer pipes over 300 mm diam.	m	
C450		i) Telecommunication cables in ducts	m	
C460		j) Telecommunication optic fibre cables	m	
C470		k) Stormwater channels and kerbs	m	
	PSDB 8.3.6	FINISHING (REINSTATEMENT)		
	8.3.6.1	Reinstate road surfaces including the following new layerworks from commercial sources:		
C480		a) 150 mm G5 gravel subbase compacted to 95% MOD AASHTO density	m ²	
C490		b) 150 mm G4 gravel base compacted to 98% of MOD AASHTO density	m ²	
C500		c) Asphalt surfacing (medium continuously grade) 40 mm thick, on prepared surface with Pen 30/60 primer & sealing of edges	m ²	
C510		d) Tack coat	m ²	
		Reinstate sidewalks and footways surfaces including the following new layerworks from commercial sources:		
C520		a) 100 mm thick G5 gravel Subbase compacted to 98% MOD. AASHTO density	m ²	
C530		b) Asphalt surfacing 30mm thick, on prepared surface with Pen 30/60 primer and sealing of edges	m ²	
		Reinstate other surfaces including the following new layerworks from commercial sources:		
C540		a) Concrete (75 mm thick, 25 MPa on 100 mm G5 gravel Subbase compacted to 95% MOD. AASHTO density on sidewalks and driveways)	m ²	
C550		b) Brick Paving (60 mm thick concrete pavers on 20 mm sand bed to matching colours on 100 mm thick G5 gravel subbase compacted to 96% MOD. AASHTO density on sidewalks)	m ²	
C560		c) Interlocking concrete block paving (40 mm thick 30 MPa on 150 mm thick G5 gravel Subbase compacted to 96 % MOD. AASHTO density in roadway)	m ²	
C570		d) Interlocking concrete block paving (80 mm thick 30 MPa on 150 mm thick G5 gravel Subbase compacted to 96 % MOD. AASHTO density in roadway)	m ²	
C580		e) Cobblestones/blocks (80 mm thick 30 MPa on 150 mm thick G5 gravel Subbase compacted to 96 % MOD. AASHTO density in roadway)	m ²	
C590		f) Reinstate grass and lawns		
C600		i) Using sods	m ²	
C610		ii) Using grass offshoots	m ²	
C620		g) Soilcrete	m ³	
C630		h) Precast concrete 150 mm wide half round dish channel	m	
		Gabions and Reno Mattress		
C640		i) 250 mm / 300 mm Reno Mattress	m ³	
C650		j) 1000 mm x 1000 mm x 1000 mm Gabions	m ³	

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SECTION D: CONCRETE KERBING AND CHANNELLING				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SANS 1200 MK	CONCRETE KERBING AND CHANNELLING		
D10	8.2.1	a) Combined kerb and infall channel to match existing - (Transition Kerb)	m	
D20	8.2.2	b) Mountable kerb to match (MK10)	m	
D30	8.2.3	c) Barrier Kerb (BK12)	m	
D40		d) Edging Kerb (E1)	m	
D50		e) Channel (C1)	m	
D60		f) Barrier Kerb (BK2)	m	
D70		g) Barrier Kerb (BK2 & C1)	m	
D80		h) Mountable kerb (CK5)	m	
D90		i) Mountable kerb (MK7)	m	
	SANS 1200 MM	ANCILLARY ROADWORKS		
		ROAD MARKINGS		
	PSMM 8.4.1	Non-reflectorised paint applied at nominal rate of 0,42 l/m ² for:		
D100		a) White lines (Broken or unbroken)		
D110		i) 100 mm wide	km	
		ii) 300 mm wide	km	
D120		b) Yellow lines (Broken or unbroken)		
D130		i) 100 mm wide	km	
D140		ii) 300 mm wide	km	
D150		c) White characters and symbols	m ²	
D160		d) Yellow characters and symbols	m ²	
		e) Traffic island markings (any colour)	m ²	
	8.4.2	Variation in rate of application from that stated for item PSMM8.4.1		
D170		a) White paint	l	
D180		b) Yellow paint	l	

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SECTION E: BULK PIPE CLEANING				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	PS-TD	BULK PIPE CLEANING AND ROOT REMOVAL		
	PS-TD 8.1	Bulk cleaning of pipelines for nominal diameters		
E10		(a) 100 mm or 150 mm	m	
E20		(b) 200 mm, 225 mm or 250 mm	m	
E30		(c) 250 mm or 300 mm	m	
E40		(d) 450 mm	m	
E50		(e) 500 mm or 525 mm	m	
E60		(f) 600 mm	m	
E70		(g) 675 mm	m	
E80		(h) 750 mm	m	
E90		(i) 825 mm	m	
E100		(j) 900 mm	m	
E110		(k) 1050 mm	m	
E120		(l) 1200 mm	m	
E130		(m) Removal of cleaned material, transport to and disposal at Vissershok private Landfill site (Receipts required)	ton	
	PS-TD 8.2	Root cutting and removal in pipelines for nominal diameters		
E140		(a) 100 mm or 150 mm	m	
E150		(b) 200 mm, 225 mm or 250 mm	m	
E160		(c) 250 mm or 300 mm	m	
E170		(d) 350 or 450 mm	m	
E180		(e) 500 mm or 525 mm	m	
E190		(f) 600 mm	m	
E200		(g) 675 mm	m	
E210		(h) 750 mm	m	
E220		(i) 825 mm	m	
E230		(j) 900 mm	m	
E240		(k) 1050 mm	m	
E250		(l) 1200 mm	m	

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SECTION F: CCTV INSPECTIONS				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	PS-TC	CCTV INSPECTIONS OF PIPELINES		
F10	PS-TC 6.3	CCTV site inspection establishment (a) in Langeberg Municipal Area	Day	
	PS-TC 6.1	CCTV camera inspection and assessment for nominal diameters		
F20		(a) 100 mm to 225 mm	m	
F30		(b) 250 mm to 300 mm	m	
F40		(c) 375 mm to 400 mm	m	
F50		(d) 450 mm to 525 mm	m	
F60		(e) 600 mm to 675 mm	m	
F70		(f) 750 mm to 825 mm	m	
F80		(g) 900 mm to 1200 mm	m	
F90	PS-TC 6.2	Manhole Inspection	No.	

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SECTION G: OVERPUMPING				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		OVERPUMPING		
	PS-TA 6.1	Temporary works: Control sewage by over-pumping: max. length 100 m: (supply all equipment: pump, sealed pipeline, sump if needed, power supply etc)		
G10		(1) up to 200 mm diam. pipes	h	
G20		(2) Up to 300 mm diam. pipes	h	
G30		(3) Up to 400 mm diam. pipes	h	
G40		(3) Up to 500 mm diam. pipes	h	
G50		(3) Up to 600 mm diam. pipes	h	
	PS-TA 6.2	Extra over for provision of additional piping when length exceeds 100 m		
		a) Lay-flat hosing		
G60		(1) up to 200 mm diam. pipes	m	
G70		(2) Up to 300 mm diam. pipes	m	
G80		(3) Up to 400 mm diam. pipes	m	
		b) Rigid piping		
G90		(1) up to 200 mm diam. pipes	m	
G100		(2) Up to 300 mm diam. pipes	m	
G110		(3) Up to 400 mm diam. pipes	m	

SCHEDULE B SEWERS

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SECTION H: SEWERS				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SANS 1200 LB	BEDDING (PIPES)		
	PSLB 8.2.1	Provision of bedding and selected fill material from trench excavations		
H10		a) Selected granular material	m ³	
H20		b) Selected fill material	m ³	
	8.2.2	Supply only of bedding material by importation		
	PSLB 8.2.2.3	From commercial sources (provisional)		
H30		a) Selected granular material	m ³	
H40		b) Selected fill material	m ³	
H50		c) 19 mm stone on top of a geofabric material for trench bottom	m ³	
	PSLB 8.2.6	Geotextile / Geomembrane wrapped around 19 mm stone bedding with 300 mm overlay:		
H60		a) A2 or similar approved	m ²	
	SANS 1200 LD	SEWERS		
		PIPEWORK (NEW PIPES)		
		SUPPLY PIPES		
	PSLD 8.2.1 a)	Supply and deliver pipes to site with spigot and socket joints		
		1) Class 34 uPVC Pipes to SABS 791 (heavy duty)		
H70		a) 110 mm diam.	m	
H80		b) 160 mm diam.	m	
H90		c) 200 mm diam.	m	
H100		d) 250 mm diam.	m	
H110		e) 315 mm diam.	m	
H120		f) 355 mm diam.	m	
H130		g) 400 mm diam.	m	
	PSLD8.2.1	2) Class 34 uPVC Pipes to SABS 791 (heavy duty) - Short lengths less than 10 metres		
H140		a) 110 mm diam. to erf connections	m	
H150		b) 160 mm diam. to point repairs	m	
H160		c) 200 mm diam. to point repairs	m	
H170		d) 250 mm diam. to point repairs	m	
H180		e) 315 mm diam. to point repairs	m	
H190		f) 355 mm diam. to point repairs	m	
H200		g) 400 mm diam. to point repairs	m	
		INSTALL PIPES		
	PSLD 8.2.1 b)	Lay, joint, bed Class B, including testing and spigot and socket joints		
		1) Class 34 uPVC Pipes to SABS 791 (heavy duty)		
H210		a) 110 mm diam.	m	
H220		b) 160 mm diam.	m	
H230		c) 200 mm diam.	m	
H240		d) 250 mm diam.	m	
H250		(e) 315 mm diam.	m	
H260		(f) 355 mm diam.	m	
H270		(g) 400 mm diam.	m	
	PSLD 8.2.1	2) Class 34 uPVC Pipes to SABS 791 (heavy duty) - Short lengths less than 10 metres		
H280		a) 110 mm diam. to erf connections	m	
H290		b) 160 mm diam. to point repairs	m	
H300		c) 200 mm diam. to point repairs	m	
H310		d) 250 mm diam. to point repairs	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
H320		e) 315 mm diam. to point repairs	m	
H330		f) 355 mm diam. to point repairs	m	
H340		g) 400 mm diam. to point repairs	m	
		JOINTING (POINT REPAIRS)		
		Cut into existing pipeline and connect new pipeline with special adaptors and make good, including hand excavation, dispose of surplus material and supply special adaptors		
H350		(a) 110 mm diam.	No.	
H360		(b) 160 mm diam.	No.	
H370		(c) 200 mm diam.	No.	
H380		(d) 250 mm diam.	No.	
H390		(e) 315 mm diam.	No.	
H400		(f) 355 mm diam.	No.	
H410		(g) 400 mm diam.	No.	
		SPECIALS AND FITTINGS FOR HOUSE CONNECTIONS		
	8.2.2	Supply, lay, joint, bed (Class B, incl. cut pipes where require), specials and fittings:		
		uPVC Fittings to SABS 791 Class 34		
		Y Junctions (45 deg)		
H420		a) 110 mm x 110 mm	No.	
H430		b) 160 mm x 110 mm	No.	
H440		c) 160 mm x 160 mm	No.	
H450		e) 200 mm x 110 mm	No.	
H460		f) 250 mm x 110 mm	No.	
H470		g) 315 mm x 110 mm	No.	
		Bends		
H480		a) 110 mm x 11.25 deg.	No.	
H490		b) 110 mm x 22.5 deg.	No.	
H500		c) 110 mm x 45 deg.	No.	
H510		d) 160 mm x 45 deg	No.	
H520		e) 200 mm x 45 deg	No.	
H530		f) 250 mm x 45 deg	No.	
H540		g) 315 mm x 45 deg	No.	
		Endcaps		
H550		(a) 110 mm diam.	No.	
H560		(b) 160 mm diam.	No.	
H570		(c) 200 mm diam.	No.	
H580		(d) 250 mm diam.	No.	
H590		(e) 315 mm diam.	No.	
H600		(f) 355 mm diam.	No.	
H610		(g) 400 mm diam.	No.	
	PSLD 8.2.3	MANHOLES		
		1) Complete as per standard detail drawing SMFC1 for 1000 mm diameter precast concrete rings with dolomitic aggregate		
H620		(a) 1 m to 2 m depth	No.	
H630		(b) 2 m to 3 m depth	No.	
H640		(c) 3 m to 4 m depth	No.	
H650		(d) 4 m to 5 m depth	No.	
H660		(e) 5 m to 6 m depth	No.	
H670		(f) 6 m to 7 m depth	No.	
H680		(g) 7 m to 8 m depth	No.	
		2) Complete as per standard detail drawing SMFC1 but with 1250 mm diameter precast concrete rings with dolomitic aggregate		
H690		(a) 1 m to 2 m depth	No.	
H700		(b) 2 m to 3 m depth	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
H710		(c) 3 m to 4 m depth	No.	
H720		(d) 4 m to 5 m depth	No.	
H730		(e) 5 m to 6 m depth	No.	
H740		(f) 6 m to 7 m depth	No.	
H750		(g) 7 m to 8 m depth	No.	
		3) Complete 450 mm x 600 mm brick inspection chamber as per standard detail drawing SMB1 with 450 mm x 600 mm medium duty ductile iron cover and frame		
H760		(a) 0.5 m to 1.0 m depth	No.	
H770		(b) 1.0 m to 1.5 m depth	No.	
	PSLD8.2.11 d)	4) Connect new 110 mm diameter connection into existing 450 mm x 600 mm brick inspection chamber and repair and make good.		
H780		(a) 0.5 m to 1.0 m depth	No.	
H790		(b) 1.0 m to 1.5 m depth	No.	
	PSLD8.2.11 e)	5) Construct new fibre-cement boundary inspection chamber (1000 mm diameter)		
H800		(a) Up to 0.6 m deep	No.	
H810		(b) Up to 1.0 m deep	No.	
H820		(c) Up to 1.5 m deep	No.	
		Connection to sewer at existing manholes		
H830	PSLD 8.2.11 a)	a) Break into existing sewer manhole and connection of new sewer	No.	
	PSLD 8.2.11 b)	b) Construct new manhole over live sewer		
H840		(a) 1 m to 2 m depth	No.	
H850		(b) 2 m to 3 m depth	No.	
H860		(c) 3 m to 4 m depth	No.	
H870		(d) 4 m to 5 m depth	No.	
H880		(e) 5 m to 6 m depth	No.	
H890		(f) 6 m to 7 m depth	No.	
H900		Brickwork to repaired manholes	m ²	
		Plaster work and grouting to repaired manholes		
H910		(a) Grout to benching	m ²	
		Minor alterations of existing manholes		
		Raise manhole by :		
H920		(a) up to 500 mm	No.	
H930		(b) between 500 mm and 1000 mm	No.	
H940		Extra-over items H920 and H930 for replacement of cover slab, covers and frames	No.	
H950	8.2.9	Marker posts	No.	
		Kerb Markers		
		Cut kerb face and paint white to mark house connections		
H960		a) House connections	No.	
	PSLD8.2.11 c)	Locate and reconnect existing property connections to new HDPE sewer main installed by pipe bursting		
H970		a) 110 mm diameter onto 160 mm diameter HDPE	No	
H980		b) 160 mm diameter onto 160 mm diameter HDPE	No	
H990		c) 110 mm diameter onto 200 mm diameter HDPE	No	
H1000		d) 160 mm diameter onto 200 mm diameter HDPE	No	
H1010		e) 110 mm diameter onto 250 mm diameter HDPE	No	
H1020		f) 160 mm diameter onto 250 mm diameter HDPE	No	
H1030		g) 110 mm diameter onto 315 mm diameter HDPE	No	
H1040		h) 160 mm diameter onto 315 mm diameter HDPE	No	

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SECTION KS: PIPE BURSTING (SEWER)				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SASTT-TS-TT2	PIPE BURSTING (FOR SEWER INFRASTRUCTURE)		
		SUPPLY PIPES FOR PIPE BURSTING		
	PS-TT2-7.1	a) Supply and delivery pipes to site of		
		1) PN 6 PE 100 HDPE pipes of diameter		
KS10		a) 110 mm	m	
KS20		b) 160 mm	m	
KS30		c) 200 mm	m	
KS40		d) 225 mm	m	
KS50		e) 250 mm	m	
KS60		f) 280 mm	m	
KS70		g) 315 mm	m	
KS80		h) 355 mm	m	
KS90		i) 400 mm	m	
KS100		j) 450 mm	m	
KS110		k) 560 mm	m	
KS120		l) 630 mm	m	
		INSTALL BY PIPE BURSTING		
	PS-TT2-7.1	b) Install by pipe bursting (Butt welding included)		
		i) SIZE FOR SIZE REPLACEMENT		
		1) PN 6 PE 100 HDPE pipes to replace existing sewer pipes (including butt welding) with diameter		
KS130		a) 110 mm	m	
KS140		b) 160 mm	m	
KS150		c) 200 mm	m	
KS160		d) 225 mm	m	
KS170		e) 250 mm	m	
KS180		f) 280 mm	m	
KS190		g) 315 mm	m	
KS200		h) 355 mm	m	
KS210		i) 400 mm	m	
KS220		j) 450 mm	m	
KS230		k) 560 mm	m	
KS240		l) 630 mm	m	
		ii) UPSIZING		
		1) PN 6 PE 100 HDPE pipes to replace existing sewer pipes (including butt welding)		
KS250		a) 100 mm existing to 160 mm diameter	m	
KS260		b) 150 mm existing to 200 mm diameter	m	
KS270		c) 150 mm existing to 225 mm diameter	m	
KS280		d) 150 mm existing to 250 mm diameter	m	
KS290		e) 200 mm existing to 225 mm diameter	m	
KS300		f) 200 mm existing to 250 mm diameter	m	
KS310		g) 200 mm existing to 280 mm diameter	m	
KS320		h) 200 mm existing to 315 mm diameter	m	
KS330		i) 200/225 mm existing to 355 mm diameter	m	
KS340		j) 300 mm existing to 355 mm diameter	m	
KS350		k) 400 mm existing to 450 mm diameter	m	

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SECTION M: SAND TRAPS AND SCREENING EQUIPMENT				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	PS-TE 6	SAND TRAPS AND SCREENING EQUIPMENT		
	PS-TE 6.1	COVERS		
M10		Manhole covers and frames		
		a) GRP 900mm x 900mm access cover and frame with handles and locking mechanism	No.	
M20		b) GRP 1500mm x 1200mm access cover and frame with locking mechanism	No.	
M30		c) Type 2A heavy-duty cast-iron cover and frame to new manholes	No.	
	PS-TE 6.2	CHAMBER COATINGS AND LININGS		
M40		Xypex Bio-San C500 to be added during concrete batching (or similar approved)	kg	
M50		Sewper Coat layer, 25mm (PG25/DS25/DS40) (or similar approved)	m ²	
M60		AKS Concrete lining (or similar approved)	m ²	
M70		Sika guard - 720 Epochem double coat to inside walls, soffit and floors (or similar approved)	m ²	
M80		Sika guard - 63N Epoxy two coats to inside walls, soffit and floors (or similar approved)	m ²	
	PS-TE 6.3	SCREENING EQUIPMENT		
		Supply and Install Included in Prov. Sum		
M90		1) Manual Front Rake Screen, including associated fittings, rake, and any other items required to complete the installation.	Prov. Sum	R 40 000.00
M100		2) Handling costs in respect of item M90	%	
	PS-TE 6.4	ISOLATING VALVES AND SLUICES		
M110		Manufacture, deliver, install and commission plate stops and penstock, including all ancillary fixing requirements as per manufacture's detail. Grade 316 Stainless Steel material of construction.		
M120		1.a) Complete Plate Stops, including frame to be casted into channel and suit channel size:	Prov. Sum	R 20 000.00
M130		1.b) Handling costs in respect of item M120	%	
M140		2.a) Channel mounted, manual penstocks, complete with frame, extended spindle and supports, headstock and handwheel to suit a channel size:	Prov. Sum	R 20 000.00
M150		2.b) Handling costs in respect of item M140	%	
M160		3.a) Wall mounted, manual penstocks, complete with frame, extended spindle and supports, headstock and handwheel to suit an opening size:	Prov. Sum	R 20 000.00
M170		3.b) Handling costs in respect of item M160	%	

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SECTION N: CONCRETE (STRUCTURAL)				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SANS 1200 G	CONCRETE (STRUCTURAL)		
	PSG 8.1.3.3	CONCRETE		
	8.4.2	Blinding layer in 20 MPa/40 mm concrete		
N10		a) 75 mm minimum thickness	m ²	
	8.4.3	Strength concrete: 20 MPa/40mm		
N20		a) Surface bed	m ³	
N30		b) Concrete benching / mass concrete in Chambers and manholes (Including for Plate stops)	m ³	
N40		c) Protection over pipework in riverbed or other watercourse	m ³	
		Strength concrete: 30 MPa/20mm		
N50		a) Walls (below and above ground level)	m ³	
N60		b) Floors and suspended roof slabs	m ³	
N70		c) Plinths (Mass Concrete)	m ³	
		Granolithic screed		
N80		a) 50mm thick on roof slabs to fall	m ²	
N90		b) 50mm thick on-screen room floors to fall	m ²	
	8.1.1	FORMWORK		
	8.2.1	1) Rough, vertical plane to		
N100		a) Walls below ground	m ²	
N110		b) Edges of foundations	m ²	
	8.2.2	2) Smooth vertical plane to:		
N120		a) Walls & outside of ground beams	m ²	
N130		b) Mass concrete	m ²	
N140		c) Sides of roof slabs	m ²	
N150		d) Plane horizontal to soffit of roof slabs	m ²	
N160	8.2.5	3) 20mm chamfers to all visible concrete edges	m	
	8.2.6	4) Box out holes/form voids		
		a) Circular openings for pipes and other services in walls/slabs up to 400mm thick for the following diameters:		
N170		i) 0 m to 0,3 m	No.	
N180		ii) 0,3 m to 0,8 m	No.	
N190		iii) 0,8 m to 1.5 m	No.	
N200		iv) > 1,5 m	No.	
		b) Rectangular/square openings in walls/slabs up to 400mm thick for the following sizes by area:		
N210		i) 0 m2 to 0,5 m2	No.	
N220		ii) 0,5 m2 to 1,0 m2	No.	
N230		iii) 1,0 m2 to 2,0 m2	No.	
N240		iv) > 2,0 m2	No.	
	PSG 8.1.2	REINFORCEMENT		
		1) Mild steel bars		
N250	8.1.2.2	a) Diameter smaller than 20 mm	t	
	8.3.1	2) High-tensile steel bars		
N260	8.1.2.2	a) Diameter up to 20 mm	t	
N270	8.1.2.2	b) Diameter larger than 20 mm	t	
	PSG 8.4.4	UNFORMED SURFACE FINISHES		
		1) Wood-floated finish (see PSG 5.5.10.5)		
N280		a) Above ground roof slabs	m ²	
N290		b) Underground walkways and platforms	m ²	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE	
N300		2) Steel-floated finish (see PSG 5.5.10.5)			
N310		a) Floor of Sand traps and Screen Channels	m ²		
N320		b) Power-floated finish (see PSG 7.3)	m ²		
		c) Application of non-slip crystals to concrete surfacing on walkways	m ²		
	PSG 8.9	TESTING FOR WATER TIGHTNESS			
N330		(a) Fixed costs: Materials for closing or blanking off and sealing all openings in walls and floor of the sewer manholes and the removal of it	m ²		
N340		(b) Water tightness test complete per chamber	No		
	PSG 8.5	JOINTS			
N350		1) Provisional Sum for the Manufacture, Supply, Delivery and Install of Joints, as per approved Engineering Drawings provided by the Engineer for Construction	Prov. Sum	R	5 000.00
N360		2) Handling costs in respect of item M90	%		

SCHEDULE C WATER

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SECTION I: WATER				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SANS 1200 LB	BEDDING (PIPES)		
	PSLB 8.2.1	Provision of bedding and selected fill material from trench excavations		
I10		a) Selected granular material	m ³	
I20		b) Selected fill material	m ³	
	8.2.2	Supply only of bedding material by importation		
	PSLB 8.2.2.3	From commercial sources (provisional)		
I30		a) Selected granular material	m ³	
I40		b) Selected fill material	m ³	
I50		c) 19 mm stone on top of a geofabric material for trench bottom	m ³	
	PSLB 8.2.6	Geotextile / Geomembrane wrapped around 19mm stone bedding with 300 mm overlay:		
I60		a) A2 or similar approved	m ²	
I70	PSLB 8.2.7	Extra over item 8.2.2 for:		
I80		a) 1:10 Cement : Sand/ Bedding (Soilcrete)	m ³	
		b) Concrete encasement 20 MPa/38mm	m ³	
	SANS 1200 L	MEDIUM-PRESSURE PIPELINES		
		PIPEWORK (NEW PIPES)		
		SUPPLY PIPES		
	PSL 8.2.1 a)	Supply and deliver pipes to site complete with spigot and socket joints		
		1) uPVC Class 12 Pressure Pipes to SABS 966		
		A) Nominal diameters		
I90		a) 110 mm diam.	m	
I100		b) 160 mm diam.	m	
I110		c) 200 mm diam.	m	
I120		d) 250 mm diam.	m	
I130		e) 300 mm diam.	m	
I140		f) 350 mm diam.	m	
		B) Short lengths less than 10 metres		
I150		a) 110 mm diam.	m	
I160		b) 160 mm diam.	m	
I170		c) 200 mm diam.	m	
I180		d) 250 mm diam.	m	
I190		e) 300 mm diam.	m	
I200		f) 350 mm diam.	m	
		2) uPVC Class 16 Pressure Pipes to SABS 966		
		A) Nominal diameters		
I210		a) 110 mm diam.	m	
I220		b) 160 mm diam.	m	
I230		c) 200 mm diam.	m	
I240		d) 250 mm diam.	m	
I250		e) 300 mm diam.	m	
I260		f) 350 mm diam.	m	
		B) Short lengths less than 10 metres		
I270		a) 110 mm diam.	m	
I280		b) 160 mm diam.	m	
I290		c) 200 mm diam.	m	
I300		d) 250 mm diam.	m	
I310		e) 300 mm diam.	m	
I320		f) 350 mm diam.	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	PSL 8.2.1 a)	Supply and deliver pipes to site for butt welded joints (excluding butt welding)		
		3) HDPE PE 100 PN 8 Pressure Pipes to SABS ISO 4427		
		A) Nominal outside diameters		
I330		a) 110 mm diam.	m	
I340		b) 160 mm diam.	m	
I350		c) 200 mm diam.	m	
I360		d) 250 mm diam.	m	
I370		e) 315 mm diam.	m	
I380		f) 355 mm diam.	m	
I390		g) 400 mm diam.	m	
		B) Short lengths less than 10 metres		
I400		a) 110 mm diam.	m	
I410		b) 160 mm diam.	m	
I420		c) 200 mm diam.	m	
I430		d) 250 mm diam.	m	
I440		e) 315 mm diam.	m	
I450		f) 355 mm diam.	m	
I460		g) 400 mm diam.	m	
		4) HDPE PE 100 PN 12.5 Pressure Pipes to SABS ISO 4427		
		A) Nominal outside diameters		
I470		a) 110 mm diam.	m	
I480		b) 160 mm diam.	m	
I490		c) 200 mm diam.	m	
I500		d) 250 mm diam.	m	
I510		e) 315 mm diam.	m	
I520		f) 355 mm diam.	m	
I530		g) 400 mm diam.	m	
		B) Short lengths less than 10 metres		
I540		a) 110 mm diam.	m	
I550		b) 160 mm diam.	m	
I560		c) 200 mm diam.	m	
I570		d) 250 mm diam.	m	
I580		e) 315 mm diam.	m	
I590		f) 355 mm diam.	m	
I600		g) 400 mm diam.	m	
		5) HDPE PE 100 PN 16 Pressure Pipes to SABS ISO 4427		
		A) Nominal outside diameters		
I610		a) 110 mm diam.	m	
I620		b) 160 mm diam.	m	
I630		c) 200 mm diam.	m	
I640		d) 250 mm diam.	m	
I650		e) 315 mm diam.	m	
I660		f) 355 mm diam.	m	
I670		g) 400 mm diam.	m	
		B) Short lengths less than 10 metres		
I680		a) 110 mm diam.	m	
I690		b) 160 mm diam.	m	
I700		c) 200 mm diam.	m	
I710		d) 250 mm diam.	m	
I720		e) 315 mm diam.	m	
I730		f) 355 mm diam.	m	
I740		g) 400 mm diam.	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		INSTALL PIPES		
	PSL 8.2.1 b)	Lay and bed (class B), with spigot and socket joints, test and disinfect		
		1) uPVC Class 12 Pressure Pipes		
		A) Nominal diameters		
I750		a) 110 mm diam.	m	
I760		b) 160 mm diam.	m	
I770		c) 200 mm diam.	m	
I780		d) 250 mm diam.	m	
I790		e) 300 mm diam.	m	
I800		f) 350 mm diam.	m	
		B) Short lengths less than 10 metres		
I810		a) 110 mm diam.	m	
I820		b) 160 mm diam.	m	
I830		c) 200 mm diam.	m	
I840		d) 250 mm diam.	m	
I850		e) 300 mm diam.	m	
I860		f) 350 mm diam.	m	
		2) uPVC Class 16 Pressure Pipes		
		A) Nominal diameters		
I870		a) 110 mm diam.	m	
I880		b) 160 mm diam.	m	
I890		c) 200 mm diam.	m	
I900		d) 250 mm diam.	m	
I910		e) 300 mm diam.	m	
I920		f) 350 mm diam.	m	
		B) Short lengths less than 10 metres		
I930		a) 110 mm diam.	m	
I940		b) 160 mm diam.	m	
I950		c) 200 mm diam.	m	
I960		d) 250 mm diam.	m	
I970		e) 300 mm diam.	m	
I980		f) 350 mm diam.	m	
	PSL 8.2.1 b)	Lay and bed (class B), with butt welded joints, test and disinfect (including butt welding)		
		3) HDPE PE 100 PN 8 Pressure Pipes		
		A) Nominal outside diameters		
I990		a) 110 mm diam.	m	
I1000		b) 160 mm diam.	m	
I1010		c) 200 mm diam.	m	
I1020		d) 250 mm diam.	m	
I1030		e) 315 mm diam.	m	
I1040		f) 355 mm diam.	m	
I1050		g) 400 mm diam.	m	
		B) Short lengths less than 10 metres		
I1060		a) 110 mm diam.	m	
I1070		b) 160 mm diam.	m	
I1080		c) 200 mm diam.	m	
I1090		d) 250 mm diam.	m	
I1100		e) 315 mm diam.	m	
I1110		f) 355 mm diam.	m	
I1120		g) 400 mm diam.	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		4) HDPE PE 100 PN 12.5 Pressure Pipes		
		A) Nominal outside diameters		
I1130		a) 110 mm diam.	m	
I1140		b) 160 mm diam.	m	
I1150		c) 200 mm diam.	m	
I1160		d) 250 mm diam.	m	
I1170		e) 315 mm diam.	m	
I1180		f) 355 mm diam.	m	
I1190		g) 400 mm diam.	m	
		B) Short lengths less than 10 metres		
I1200		a) 110 mm diam.	m	
I1210		b) 160 mm diam.	m	
I1220		c) 200 mm diam.	m	
I1230		d) 250 mm diam.	m	
I1240		e) 315 mm diam.	m	
I1250		f) 355 mm diam.	m	
I1260		g) 400 mm diam.	m	
		5) HDPE PE 100 PN 16 Pressure Pipes		
		A) Nominal outside diameters		
I1270		a) 110 mm diam.	m	
I1280		b) 160 mm diam.	m	
I1290		c) 200 mm diam.	m	
I1300		d) 250 mm diam.	m	
I1310		e) 315 mm diam.	m	
I1320		f) 355 mm diam.	m	
I1330		g) 400 mm diam.	m	
		B) Short lengths less than 10 metres		
I1340		a) 110 mm diam.	m	
I1350		b) 160 mm diam.	m	
I1360		c) 200 mm diam.	m	
I1370		d) 250 mm diam.	m	
I1380		e) 315 mm diam.	m	
I1390		f) 355 mm diam.	m	
I1400		g) 400 mm diam.	m	
	PSL 8.2.2	BUTT WELDING OF HDPE PIPES		
		Site Establishment and de-establishment per butt welding assignment including provision of power		
I1410		i) Langeberg Municipal Area	Sum	
		JOINTING (POINT REPAIRS)		
	PSL 8.2.3	Cut into existing pipeline and connect new pipeline and specials and make good, including hand excavation, dispose of surplus material and supply two long collar detachable joints		
I1420		a) 110 mm diam.	No.	
I1430		b) 160 mm diam.	No.	
I1440		c) 200 mm diam.	No.	
I1450		d) 250 mm diam.	No.	
I1460		e) 300/315 mm diam.	No.	
I1470		f) 350/355 mm diam.	No.	
I1480		g) 400 mm diam.	m	
	PSL 8.2.5	Connect new watermain into existing FC watermain.		
		1) 110 mm diameter pipeline into		
I1490		a) 50 mm diam. FC	No.	
I1500		b) 75 mm diam. FC	No.	
I1510		c) 100 mm diam. FC	No.	
I1520		d) 150 mm diam. FC	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I1530		e) 200 mm diam. FC	No.	
I1540		f) 250 mm diam. FC	No.	
I1550		g) 300 mm diam. FC	No.	
		2) 160 mm diameter pipeline into		
I1560		a) 100 mm diam. FC	No.	
I1570		b) 150 mm diam. FC	No.	
I1580		c) 200 mm diam. FC	No.	
I1590		d) 250 mm diam. FC	No.	
I1600		e) 300 mm diam. FC	No.	
		3) 200 mm diameter pipeline into		
I1610		a) 75 mm diam. FC	No.	
I1620		b) 100 mm diam. FC	No.	
I1630		c) 150 mm diam. FC	No.	
I1640		d) 200 mm diam. FC	No.	
I1650		e) 250 mm diam. FC	No.	
I1660		f) 300 mm diam. FC	No.	
I1670		g) 350 mm diam. FC	No.	
		4) 250 mm diameter pipeline into		
I1680		a) 75 mm diam. FC	No.	
I1690		b) 100 mm diam. FC	No.	
I1700		c) 150 mm diam. FC	No.	
I1710		d) 200 mm diam. FC	No.	
I1720		e) 250 mm diam. FC	No.	
I1730		f) 300 mm diam. FC	No.	
I1740		g) 350 mm diam. FC	No.	
		5) 300/315 mm diameter pipeline into		
I1750		a) 100 mm diam. FC	No.	
I1760		b) 150 mm diam. FC	No.	
I1770		c) 200 mm diam. FC	No.	
I1780		d) 250 mm diam. FC	No.	
I1790		e) 300 mm diam. FC	No.	
I1800		f) 350 mm diam. FC	No.	
		5) 350/355 mm diameter pipeline into		
I1810		a) 100 mm diam. FC	No.	
I1820		b) 150 mm diam. FC	No.	
I1830		c) 200 mm diam. FC	No.	
I1840		d) 250 mm diam. FC	No.	
I1850		e) 300 mm diam. FC	No.	
I1860		f) 350 mm diam. FC	No.	
		SPECIALS AND FITTINGS		
	8.2.2	Supply, lay, bed, joint, incl. cut pipes to length where required, test and disinfect.		
	PSL 8.2.6	1) Ductile Iron fittings for uPVC pipes		
		BENDS		
		11.25 deg		
I1870		a) 110 mm diam.	No.	
I1880		b) 160 mm diam.	No.	
I1890		c) 200 mm diam.	No.	
I1900		d) 250 mm diam.	No.	
I1910		e) 300 mm diam.	No.	
I1920		f) 350 mm diam.	No.	
		22.5 deg		
I1930		a) 110 mm diam.	No.	
I1940		b) 160 mm diam.	No.	
I1950		c) 200 mm diam.	No.	
I1960		d) 250 mm diam.	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I1970		e) 300 mm diam.	No.	
I1980		f) 350 mm diam.	No.	
		45 deg		
I1990		a) 110 mm diam.	No.	
I2000		b) 160 mm diam.	No.	
I2010		c) 200 mm diam.	No.	
I2020		d) 250 mm diam.	No.	
I2030		e) 300 mm diam.	No.	
I2040		f) 350 mm diam.	No.	
		90 deg		
I2050		a) 110 mm diam.	No.	
I2060		b) 160 mm diam.	No.	
I2070		c) 200 mm diam.	No.	
I2080		d) 250 mm diam.	No.	
I2090		e) 300 mm diam.	No.	
I2100		f) 350 mm diam.	No.	
		EQUAL TEES		
I2110		a) 110 mm diam.	No.	
I2120		b) 160 mm diam.	No.	
I2130		c) 200 mm diam.	No.	
I2140		d) 250 mm diam.	No.	
I2150		e) 300 mm diam.	No.	
I2160		f) 350 mm diam.	No.	
		REDUCING TEES		
I2170		a) 110 mm off 160 mm diam.	No.	
I2180		b) 110 mm off 200 mm diam.	No.	
I2190		c) 160 mm off 200 mm diam.	No.	
I2200		d) 160 mm off 250 mm diam.	No.	
I2210		e) 250 mm off 300 mm diam.	No.	
I2220		f) 300 mm off 350 mm diam.	No.	
		REDUCERS		
I2230		a) 160 mm to 110 mm diam.	No.	
I2240		b) 200 mm to 160 mm diam.	No.	
I2250		c) 250 mm to 200 mm diam.	No.	
I2260		d) 300 mm to 250 mm diam.	No.	
I2270		e) 250 mm off 300 mm diam.	No.	
I2280		f) 300 mm off 350 mm diam.	No.	
	PSL 8.2.7	2) HDPE Electrofusion fittings for HDPE pipes		
		BENDS		
		11.25 deg		
I2290		a) 110 mm diam.	No.	
I2300		b) 160 mm diam.	No.	
I2310		c) 200 mm diam.	No.	
I2320		d) 250 mm diam.	No.	
I2330		e) 315 mm diam.	No.	
I2340		f) 355 mm diam.	No.	
I2350		g) 400 mm diam.	m	
		22.5 deg		
I2360		a) 110 mm diam.	No.	
I2370		b) 160 mm diam.	No.	
I2380		c) 200 mm diam.	No.	
I2390		d) 250 mm diam.	No.	
I2400		e) 315 mm diam.	No.	
I2410		f) 355 mm diam.	No.	
I2420		g) 400 mm diam.	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I2430		45 deg a) 110 mm diam.	No.	
I2440		b) 160 mm diam.	No.	
I2450		c) 200 mm diam.	No.	
I2460		d) 250 mm diam.	No.	
I2470		e) 315 mm diam.	No.	
I2480		f) 355 mm diam.	No.	
I2490		g) 400 mm diam.	m	
I2500		67.5 deg a) 110 mm diam.	No.	
I2510		b) 160 mm diam.	No.	
I2520		c) 200 mm diam.	No.	
I2530		d) 250 mm diam.	No.	
I2540		e) 315 mm diam.	No.	
I2550		f) 355 mm diam.	No.	
		g) 400 mm diam.	m	
I2560		90 deg a) 110 mm diam.	No.	
I2570		b) 160 mm diam.	No.	
I2580		c) 200 mm diam.	No.	
I2590		d) 250 mm diam.	No.	
I2600		e) 315 mm diam.	No.	
I2610		f) 355 mm diam.	No.	
I2620		g) 400 mm diam.	m	
I2630		EQUAL TEES a) 110 mm diam.	No.	
I2640		b) 160 mm diam.	No.	
I2650		c) 200 mm diam.	No.	
I2660		d) 250 mm diam.	No.	
I2670		e) 315 mm diam.	No.	
I2680		f) 355 mm diam.	No.	
I2690		g) 400 mm diam.	m	
I2700		REDUCING TEES with electrofusion couplings and stainless steel grade 316 backing flanges (Schedule 10) including stainless steel grade 316 nuts and bolts a) 110 mm off 160 mm diam.	No.	
I2710		b) 110 mm off 200 mm diam.	No.	
I2720		c) 160 mm off 200 mm diam.	No.	
I2730		d) 160 mm off 250 mm diam.	No.	
I2740		e) 250 mm off 315 mm diam.	No.	
I2750		f) 315 mm off 355 mm diam.	No.	
I2760		g) 355 mm off 400 mm diam.	No.	
I2770		REDUCERS a) 160 mm to 110 mm diam.	No.	
I2780		b) 200 mm to 160 mm diam.	No.	
I2790		c) 250 mm to 200 mm diam.	No.	
I2800		d) 315 mm to 250 mm diam.	No.	
I2810		e) 355 mm to 315 mm diam.	No.	
I2820		f) 400 mm to 355 mm diam.	No.	
I2830		REDUCERS double flanged stainless-steel grade 316 (Schedule 10) drilled table D BS10 including stainless steel grade 316 nuts and bolts a) 100 mm to 75 mm diam.	No.	
I2840		b) 150 mm to 75 mm diam.	No.	
I2850		c) 150 mm to 100 mm diam.	No.	
I2860		d) 200 mm to 100 mm diam.	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I2870		e) 200 mm to 150 mm diam.	No.	
I2880		f) 250 mm to 150 mm diam.	No.	
I2890		g) 250 mm to 200 mm diam.	No.	
I2900		h) 300 mm to 200 mm diam.	No.	
I2910		i) 350 mm to 300 mm diam.	No.	
		REDUCING TEES all flanged stainless-steel grade 316 (Schedule 10) drilled table D BS10 including stainless steel grade 316 nuts and bolts		
I2920		a) 75 mm off 100 mm diam.	No.	
I2930		b) 100 mm off 100 mm diam.	No.	
I2940		c) 75 mm off 150 mm diam.	No.	
I2950		d) 100 mm off 150 mm diam.	No.	
I2960		e) 150 mm off 150 mm diam.	No.	
I2970		f) 75 mm off 200 mm diam.	No.	
I2980		g) 100 mm off 200 mm diam.	No.	
I2990		h) 150 mm off 200 mm diam.	No.	
I3000		i) 200 mm off 200 mm diam.	No.	
I3010		j) 75 mm off 250 mm diam.	No.	
I3020		k) 100 mm off 250 mm diam.	No.	
I3030		l) 150 mm off 250 mm diam.	No.	
I3040		m) 200 mm off 250 mm diam.	No.	
I3050		n) 250 mm off 250 mm diam.	No.	
I3060		o) 150 mm off 300 mm diam.	No.	
		3) HDPE Butt Fusion fittings for HDPE pipes		
		BENDS		
		67.5 deg		
I3070		a) 355 mm OD Class PN6	No.	
I3080		b) 400 mm OD Class PN8	No.	
		90 deg		
I3090		a) 355 mm OD Class PN6	No.	
I3100		b) 400 mm OD Class PN8	No.	
		REDUCERS		
I3110		a) 355 OD Class PN6 to 400 OD Class 8	No.	
		ANCILLARIES		
I3120	8.2.11	Demolish and remove existing thrust blocks	No.	
		New Anchor/Thrust blocks and pedestals		
I3130		Concrete mix 25/19 (excluding cement)	m ³	
I3140		Supply of Cement only for 25/19 concrete mix	m ³	
I3150		Marker posts	No.	
I3160		Kerb Markers	No	
		Cut kerb face and paint to mark hydrants, valves and house connections		
I3170		a) Hydrants	No.	
I3180		b) Valves	No.	
I3190		c) House connections	No.	
		VALVES		
	PSL 8.2.8	Demolish existing valve chamber, reconstruct and supply and install new flanged resilient seal gate valve. The installation to include welded HDPE stubs with stainless steel grade 316 flange backing rings on existing HDPE pipe		
	8.2.8 a)	SUPPLY GATE VALVE		
		Supply and deliver to site flanged resilient seal gate valve as seen in standard detail 2		
I3200		a) 100 mm diameter	No.	
I3210		b) 150 mm diameter	No.	
I3220		c) 200 mm diameter	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I3230	8.2.8 b)	d) 250 mm diameter	No.	
I3240		e) 315 mm diameter	No.	
I3250		f) 355 mm diameter	No.	
		INSTALL GATE VALVE		
		Demolish existing valve chamber, supply remaining materials, reconstruct and install gate valve, complete as per standard detail 2		
I3260		a) 100 mm diameter	No.	
I3270		b) 150 mm diameter	No.	
I3280		c) 200 mm diameter	No.	
I3290		d) 250 mm diameter	No.	
I3300		e) 315 mm diameter	No.	
I3310		f) 355 mm diameter	No.	
I3320	PSL 8.2.14	Replace cover & frame of reconstructed valve chamber with new ductile iron cover as seen in standard detail 2	No.	
		AIR VALVES		
		Replace existing air valve		
		SUPPLY AIR VALVE		
I3330		Supply RBX Vent-O-Mat air valve or similar approved complete with T-pieces and couplings where necessary, Class 16 Flanged HDPE stub with stainless steel backing ring.	No.	
I3340		a) 25 mm diameter	No.	
I3350		b) 50 mm diameter	No.	
I3360		c) 80 mm diameter	No.	
I3370		d) 100 mm diameter	No.	
I3380		e) 150 mm diameter	No.	
I3390		f) 200 mm diameter	No.	
		INSTALL AIR VALVE		
		Demolish existing air valve chamber, supply remaining materials, reconstruct and install air valve positioned vertically above watermain of		
I3400		a) 110 mm diameter	No.	
I3410		b) 160 mm diameter	No.	
I3420		c) 200 mm diameter	No.	
I3430		d) 250 mm diameter	No.	
I3440		e) 315 mm diameter	No.	
I3450		f) 355 mm diameter	No.	
		g) 400 mm diameter	No.	
		Replace cover and frame of reconstructed air valve with new lockable ductile iron class B125 cover and frame		
I3460		a) Akseess 5000 Saint Gobain (SANS 50124) (or similar approved)	No.	
		FIRE HYDRANTS		
	PSL 8.2.9	Replace existing fire hydrant valve, tee and fittings, as seen in standard details FH1		
		SUPPLY HYDRANT GATE VALVE		
I3470	8.2.9 a)	Supply and deliver to site 70 mm diameter flanged resilient seal hydrant gate valve, as seen in standard details DETAIL 2	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		INSTALL HYDRANT GATE VALVE		
	8.2.9 b)	Demolish existing hydrant chamber, supply remaining materials, reconstruct and install hydrant gate valve (complete as per standard details DETAIL 2) positioned vertically above watermain of		
I3480		a) 110 mm diameter	No.	
I3490		b) 160 mm diameter	No.	
I3500		c) 200 mm diameter	No.	
I3510		d) 250 mm diameter	No.	
I3520		e) 315 mm diameter	No.	
I3530		f) 355 mm diameter	No.	
I3540		g) 400 mm diameter	No	
	8.2.9 b)	Demolish existing hydrant chamber, supply remaining materials, reconstruct and install hydrant gate valve (complete as per standard details DETAIL 2) positioned horizontally offset from watermain of		
I3550		a) 110 mm diameter	No.	
I3560		b) 160 mm diameter	No.	
I3570		c) 200 mm diameter	No.	
I3580		d) 250 mm diameter	No.	
I3590		e) 315 mm diameter	No.	
I3600		f) 355 mm diameter	No.	
I3610		g) 400 mm diameter	No	
		Replace cover and frame of reconstructed fire hydrant with new ductile iron cover and frame (as seen in standard details FH1)		
I3620		a) Hydrex Sliding Cover Hydrant Box Ductile Iron Calss C250 (250kN) (SANS 50124)	No.	
	SANS 1200 LF	HOUSE CONNECTIONS		
	PSL 8.2.10	REPLACE HOUSE CONNECTIONS PIPEWORK		
	PSL 8.2.10 a)	SUPPLY PIPES		
		Supply and delivery of Class 16 Polycop piping to SANS ISO 15874		
I3630		a) 15 mm diameter	m	
I3640		b) 20 mm diameter	m	
I3650		c) 25 mm diameter	m	
I3660		d) 40 mm diameter	m	
		Supply of PEX-Aluminium-PEX multi-layer pipes Class 16		
I3670		a) 15 mm diameter	m	
I3680		b) 20 mm diameter	m	
I3690		c) 25 mm diameter	m	
I3700		d) 40 mm diameter	m	
		Supply of HDPE PE 100 PN 16 Pressure Pipes to SABS ISO 4427		
I3710		a) 15 mm diameter	m	
I3720		b) 20 mm diameter	m	
I3730		c) 25 mm diameter	m	
I3740		d) 40 mm diameter	m	
	8.2.10 b)	SUPPLY CONNECITON FITTINGS		
		SUPPLY BALL VALVES		
		Supply and deliver to site approved DZR ball valves		
		1) Copper to Copper		
I3750		i) 15 mm diameter	No.	
I3760		ii) 22 mm diameter	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I3770		iv) 28 mm diameter	No.	
I3780		2) Female to Female	No.	
I3790		i) 15 mm diameter	No.	
I3800		ii) 22 mm diameter	No.	
		ii) 25 mm diameter	No.	
		SUPPLY SADDLES		
		Supply of JASWIC approved HEAVY DUTY (MAGNUM) CLASS 16 POLYPROPYLENE saddles with DZR threaded outlet and secured stainless steel bolts and nuts saddles:		
I3810		a) 110 mm diameter	No.	
I3820		b) 160 mm diameter	No.	
I3830		c) 200 mm diameter	No.	
I3840		d) 250 mm diameter	No.	
I3850		e) 315 mm diameter	No.	
I3860		f) 350 mm diameter	No.	
	PSL 8.2.10 c)	INSTALL PIPES AND FITTINGS		
	PSL 8.2.10 c)	Excavate, lay, bed, joint erf connection pipes of following material and diameter, as per standard details DETAIL 1 (supply of materials measured separately)		
		Installation of Class 16 Polycop piping to SANS ISO 15874		
I3870		a) 15 mm diameter connection onto 110 mm diameter watermain	m	
I3880		b) 20 mm diameter connection onto 110 mm diameter watermain	m	
I3890		c) 25 mm diameter connection onto 110 mm diameter watermain	m	
I3900		d) 40 mm diameter connection onto 110 mm diameter watermain	m	
I3910		e) 15 mm diameter connection onto 160 mm diameter watermain	m	
I3920		f) 20 mm diameter connection onto 160 mm diameter watermain	m	
I3930		g) 25 mm diameter connection onto 160 mm diameter watermain	m	
I3940		h) 40 mm diameter connection onto 160 mm diameter watermain	m	
I3950		i) 15 mm diameter connection onto 200 mm diameter watermain	m	
I3960		j) 20 mm diameter connection onto 200 mm diameter watermain	m	
I3970		k) 25 mm diameter connection onto 200 mm diameter watermain	m	
I3980		l) 40 mm diameter connection onto 200 mm diameter watermain	m	
I3990		m) 15 mm diameter connection onto 250 mm diameter watermain	m	
I4000		n) 20 mm diameter connection onto 250 mm diameter watermain	m	
I4010		o) 25 mm diameter connection onto 250 mm diameter watermain	m	
I4020		p) 40 mm diameter connection onto 250 mm diameter watermain	m	
I4030		q) 15 mm diameter connection onto 315 mm diameter watermain	m	
I4040		r) 20 mm diameter connection onto 315 mm diameter watermain	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I4050		s) 25 mm diameter connection onto 315 mm diameter watermain	m	
I4060		t) 40 mm diameter connection onto 315 mm diameter watermain	m	
I4070		u) 15 mm diameter connection onto 355 mm diameter watermain	m	
I4080		v) 20 mm diameter connection onto 355 mm diameter watermain	m	
I4090		w) 25 mm diameter connection onto 355 mm diameter watermain	m	
I4100		x) 40 mm diameter connection onto 355 mm diameter watermain	m	
		Installation of PEX-Aluminium-PEX multi-layer pipes Class 16		
I4110		a) 15 mm diameter connection onto 110 mm diameter watermain	m	
I4120		b) 20 mm diameter connection onto 110 mm diameter watermain	m	
I4130		c) 25 mm diameter connection onto 110 mm diameter watermain	m	
I4140		d) 40 mm diameter connection onto 110 mm diameter watermain	m	
I4150		e) 15 mm diameter connection onto 160 mm diameter watermain	m	
I4160		f) 20 mm diameter connection onto 160 mm diameter watermain	m	
I4170		g) 25 mm diameter connection onto 160 mm diameter watermain	m	
I4180		h) 40 mm diameter connection onto 160 mm diameter watermain	m	
I4190		i) 15 mm diameter connection onto 200 mm diameter watermain	m	
I4200		j) 20 mm diameter connection onto 200 mm diameter watermain	m	
I4210		k) 25 mm diameter connection onto 200 mm diameter watermain	m	
I4220		l) 40 mm diameter connection onto 200 mm diameter watermain	m	
I4230		m) 15 mm diameter connection onto 250 mm diameter watermain	m	
I4240		n) 20 mm diameter connection onto 250 mm diameter watermain	m	
I4250		o) 25 mm diameter connection onto 250 mm diameter watermain	m	
I4260		p) 40 mm diameter connection onto 250 mm diameter watermain	m	
I4270		q) 15 mm diameter connection onto 315 mm diameter watermain	m	
I4280		r) 20 mm diameter connection onto 315 mm diameter watermain	m	
I4290		s) 25 mm diameter connection onto 315 mm diameter watermain	m	
I4300		t) 40 mm diameter connection onto 315 mm diameter watermain	m	
I4310		u) 15 mm diameter connection onto 355 mm diameter watermain	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
I4320		v) 20 mm diameter connection onto 355 mm diameter watermain	m	
I4330		w) 25 mm diameter connection onto 355 mm diameter watermain	m	
I4340		x) 40 mm diameter connection onto 355 mm diameter watermain	m	
		Installation of HDPE PE 100 PN 16 Pressure Pipes to SABS ISO 4427		
I4350		a) 15 mm diameter connection onto 110 mm diameter watermain	m	
I4360		b) 20 mm diameter connection onto 110 mm diameter watermain	m	
I4370		c) 25 mm diameter connection onto 110 mm diameter watermain	m	
I4380		d) 40 mm diameter connection onto 110 mm diameter watermain	m	
I4390		e) 15 mm diameter connection onto 160 mm diameter watermain	m	
I4400		f) 20 mm diameter connection onto 160 mm diameter watermain	m	
I4410		g) 25 mm diameter connection onto 160 mm diameter watermain	m	
I4420		h) 40 mm diameter connection onto 160 mm diameter watermain	m	
I4430		i) 15 mm diameter connection onto 200 mm diameter watermain	m	
I4440		j) 20 mm diameter connection onto 200 mm diameter watermain	m	
I4450		k) 25 mm diameter connection onto 200 mm diameter watermain	m	
I4460		l) 40 mm diameter connection onto 200 mm diameter watermain	m	
I4470		m) 15 mm diameter connection onto 250 mm diameter watermain	m	
I4480		n) 20 mm diameter connection onto 250 mm diameter watermain	m	
I4490		o) 25 mm diameter connection onto 250 mm diameter watermain	m	
I4500		p) 40 mm diameter connection onto 250 mm diameter watermain	m	
I4510		q) 15 mm diameter connection onto 315 mm diameter watermain	m	
I4520		r) 20 mm diameter connection onto 315 mm diameter watermain	m	
I4530		s) 25 mm diameter connection onto 315 mm diameter watermain	m	
I4540		t) 40 mm diameter connection onto 315 mm diameter watermain	m	
I4550		u) 15 mm diameter connection onto 355 mm diameter watermain	m	
I4560		v) 20 mm diameter connection onto 355 mm diameter watermain	m	
I4570		w) 25 mm diameter connection onto 355 mm diameter watermain	m	
I4580		x) 40 mm diameter connection onto 355 mm diameter watermain	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		IMPACT MOLING		
		Extra-Over items I3520 to I3990 for ERF CONNECTIONS to replace existing leading on sidewalks and/or under road by means of IMPACT MOLING via pneumatically driven machine with PEX-AL-PEX or HDPE PE100 PN16, include associated compression fittings, SABS ISO 4427 approved. Rate to be inclusive of establishment, installation, commissioning and de-establishment of plant (pipes measured separately)		
I4590		a) PEX-Aluminium-PEX		
I4600		a) 15 mm diameter	m	
I4610		b) 20 mm diameter	m	
I4620		c) 25 mm diameter	m	
		d) 40 mm diameter	m	
		b) HDPE PE100 PN16		
I4630		a) 15 mm diameter	m	
I4640		b) 20 mm diameter	m	
I4650		c) 25 mm diameter	m	
I4660		d) 40 mm diameter	m	
		REPLACE WATER METERS		
		Replace existing water meter with the same size water meter approved by Employer.		
		SUPPLY WATER METER		
I4670	PSL 8.2.15 a)	Supply and deliver to site approved water meter of		
I4680		a) 15 mm diameter	No.	
I4690		b) 20 mm diameter	No.	
I4700		c) 25 mm diameter	No.	
		d) 40 mm diameter	No.	
		INSTALL WATER METER		
I4710	PSL 8.2.15 b)	Remove existing water meter, supply remaining materials and install new water meter		
I4720		a) 15 mm diameter	No.	
I4730		b) 20 mm diameter	No.	
I4740		c) 25 mm diameter	No.	
		d) 40 mm diameter	No.	
		TEMPORARY WATER BYPASS TO SUPPLY WATER TO AFFECTED PROPERTIES		
I4750	PSL 8.2.11	Supply, install, maintain and dismantle water bypass pipeline		
I4760		a) 32/40 mm diameter HDPE PN 12.5 PE 100	m	
I4770		b) 50/63 mm diameter HDPE PN 12.5 PE 100	m	
		c) 90/110 mm diameter HDPE PN 12.5 PE 100	m	
		WATERMAIN TIE-INS		
I4780	PSL 8.2.12	1) Tie-in new PVC watermain into existing FC watermain with AC/PVC Adaptors (Class 12)		
I4790		a) 110 mm diameter Range 95-104 Branch 25 mm diameter	No.	
I4800		b) 250 mm diameter PVC to 259 mm diameter FC	No.	
		c) 315 mm diameter PVC to 328 mm diameter FC	No.	
I4810	PSL 8.2.12	2) Tie-in new HDPE pipe to existing water pipe Including stainless steel backing ring and HDPE stub (SDR 11) with flange ranger (stainless steel T-bolts, washers and nuts)		
I4820		a) 110 mm diam. HDPE to 100 mm watermain	No.	
I4830		b) 160 mm diam. HDPE to 150 mm watermain	No.	
I4840		c) 200 mm diam. HDPE to 200 mm watermain	No.	
I4850		d) 250 mm diam. HDPE to 250 mm watermain	No.	
I4860		e) 315 mm diam. HDPE to 300 mm watermain	No.	
		f) 355 mm diam. HDPE to 350 mm watermain	No.	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		REPAIR COUPLINGS AND FITTINGS		
		END CAPS		
		1) uPVC (Class 12)		
I4870		a) 75 mm diameter	No.	
I4880		b) 90 mm diameter	No.	
I4890		c) 110 mm diameter	No.	
I4900		d) 160 mm diameter	No.	
I4910		e) 200 mm diameter	No.	
I4920		f) 250 mm diameter	No.	
I4930		g) 300 mm diameter	No.	
I4940		h) 350 mm diameter	No.	
		2) Ductile iron		
I4950		a) 75 mm diameter	No.	
I4960		b) 90 mm diameter	No.	
I4970		c) 110 mm diameter	No.	
I4980		d) 160 mm diameter	No.	
I4990		e) 200 mm diameter	No.	
I5000		f) 250 mm diameter	No.	
I5010		g) 300 mm diameter	No.	
I5020		h) 350 mm diameter	No.	
		FLANGE ADAPTORS (1 socket, 1 flanged end)		
		1) Ductile iron flange adaptors for uPVC pipes		
I5030		a) 75 x 75 mm diameter	No.	
I5040		b) 90 x 90 mm diameter	No.	
I5050		c) 110 x 110 mm diameter	No.	
I5060		d) 160 x 110 mm diameter	No.	
I5070		e) 200 x 110 mm diameter	No.	
I5080		f) 200 x 160 mm diameter	No.	
		VIKING JOHNSON COUPLINGS		
I5090		a) 80 mm diameter	No.	
I5100		b) 110 mm diameter	No.	
I5110		c) 160 mm diameter	No.	
I5120		d) 200 mm diameter	No.	
I5130		e) 250 mm diameter	No.	
I5140		f) 300 mm diameter	No.	
I5150		g) 350 mm diameter	No.	
		RANGER COUPLINGS		
I5160		a) 80 mm diameter	No.	
I5170		b) 110 mm diameter	No.	
I5180		c) 160 mm diameter	No.	
I5190		d) 200 mm diameter	No.	
I5200		e) 250 mm diameter	No.	
I5210		f) 300 mm diameter	No.	
I5220		g) 350 mm diameter	No.	

**CONTRACT NO. T36/2024 TERM TENDER FOR PIPE REPLACEMENT USING
CONVENTIONAL AND TRENCHLESS METHODS**

SECTION KW: PIPE BURSTING (WATER)				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SASTT-TS-TT2	PIPE BURSTING (FOR WATER INFRASTRUCTURE)		
	PS-TT2-7.1	SUPPLY PIPES FOR PIPE BURSTING		
		a) Supply and delivery pipes to site of		
		1) PN 12.5 PE 100 HDPE pipes of diameter		
KW10		a) 110 mm	m	
KW20		b) 160 mm	m	
KW30		c) 200 mm	m	
KW40		d) 225 mm	m	
KW50		e) 250 mm	m	
KW60		f) 280 mm	m	
KW70		g) 315 mm	m	
KW80		h) 355 mm	m	
KW90		i) 400 mm	m	
KW100		j) 450 mm	m	
KW110		k) 560 mm	m	
KW120		l) 630 mm	m	
		2) PN 16 PE 100 HDPE pipes of diameter		
KW130		a) 110 mm	m	
KW140		b) 160 mm	m	
KW150		c) 200 mm	m	
KW160		d) 225 mm	m	
KW170		e) 250 mm	m	
KW180		f) 280 mm	m	
KW190		g) 315 mm	m	
KW200		h) 355 mm	m	
KW210		i) 400 mm	m	
KW220		j) 450 mm	m	
KW230		k) 560 mm	m	
KW240		l) 630 mm	m	
	PS-TT2-7.1	INSTALL BY PIPE BURSTING		
		b) Install by pipe bursting (Butt welding included)		
		i) SIZE FOR SIZE REPLACEMENT		
		1) PN 12.5 PE 100 HDPE pipes to replace existing watermains (including butt welding) with diameter		
KW250		a) 110 mm	m	
KW260		b) 160 mm	m	
KW270		c) 200 mm	m	
KW280		d) 225 mm	m	
KW290		e) 250 mm	m	
KW300		f) 280 mm	m	
KW310		g) 315 mm	m	
KW320		h) 355 mm	m	
KW330		i) 400 mm	m	
KW340		j) 450 mm	m	
KW350		k) 560 mm	m	
KW360		l) 630 mm	m	
		2) PN 16 PE 100 HDPE pipes to replace existing watermains (including butt welding) with diameter		
KW370		a) 110 mm	m	
KW380		b) 160 mm	m	
KW390		c) 200 mm	m	
KW400		d) 225 mm	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
KW410		e) 250 mm	m	
KW420		f) 280 mm	m	
KW430		g) 315 mm	m	
KW440		h) 355 mm	m	
KW450		i) 400 mm	m	
KW460		j) 450 mm	m	
KW470		k) 560 mm	m	
KW480		l) 630 mm	m	
		ii) UPSIZING		
		1) PN 12.5 PE 100 HDPE pipes to replace existing watermains (including butt welding)		
KW490		a) 50 mm existing to 110 mm diameter	m	
KW500		b) 75 mm existing to 110 mm diameter	m	
KW510		c) 75 mm existing to 160 mm diameter	m	
KW520		d) 100 mm existing to 160 mm diameter	m	
KW530		e) 100 mm existing to 200 mm diameter	m	
KW540		f) 150 mm existing to 200 mm diameter	m	
KW550		g) 150 mm existing to 225 mm diameter	m	
KW560		h) 150 mm existing to 250 mm diameter	m	
KW570		i) 150 mm existing to 315 mm diameter	m	
KW580		j) 200 mm existing to 250 mm diameter	m	
KW590		k) 200 mm existing to 225 mm diameter	m	
KW600		l) 200 mm existing to 280 mm diameter	m	
KW610		m) 200 mm existing to 315 mm diameter	m	
KW620		n) 250 mm existing to 315 mm diameter	m	
KW630		o) 300 mm existing to 355 mm diameter	m	
KW640		p) 300 mm existing to 400 mm diameter	m	
		2) PN 16 PE 100 HDPE pipes to replace existing watermains (including butt welding)		
KW650		a) 50 mm existing to 110 mm diameter	m	
KW660		b) 75 mm existing to 110 mm diameter	m	
KW670		c) 75 mm existing to 160 mm diameter	m	
KW680		d) 100 mm existing to 160 mm diameter	m	
KW690		e) 100 mm existing to 200 mm diameter	m	
KW700		f) 150 mm existing to 200 mm diameter	m	
KW710		g) 150 mm existing to 225 mm diameter	m	
KW720		h) 150 mm existing to 250 mm diameter	m	
KW730		i) 150 mm existing to 315 mm diameter	m	
KW740		j) 200 mm existing to 250 mm diameter	m	
KW750		k) 200 mm existing to 225 mm diameter	m	
KW760		l) 200 mm existing to 280 mm diameter	m	
KW770		m) 200 mm existing to 315 mm diameter	m	
KW780		n) 250 mm existing to 315 mm diameter	m	
KW790		o) 300 mm existing to 355 mm diameter	m	
KW800		p) 300 mm existing to 400 mm diameter	m	

**CONTRACT NO. T36/2024 TERM TENDER FOR PIPE REPLACEMENT USING
CONVENTIONAL AND TRENCHLESS METHODS**

SECTION MW : HDPE SLIPLINING				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		HDPE SLIPLINING		
	Particular	Specification FA, FB, SASTT-TS-TT1		
MW10	FS9.7.1	Supply and install by sliplining HDPE PE100 Pipe		
		i) Class PN 6 (SDR 26) 355 OD inside 375 ID	m	
MW20		iii) Class PN 6 (SDR 26) 400 OD inside 450 ID	m	
MW30	FS9.7.4	Grouting annulus	m3	
MW40	FS9.7.3	Construct pits for winching/insertion of liner: (Insertion pits 8m long for 1,5m depth)	Sum	
	FS9.7.2	SERVICE RECONNECTIONS		
		Re-establish connection to existing consumer. Supply and install Buffalo Saddle with flange offtake (or similar approved) to 355 HDPE liner and reconnect connection pipe.		
MW50		a) 50 mm diameter offtake	No	
MW60		b) 75 mm diameter offtake	No	
MW70		b) 100 mm diameter offtake	No	
		REMOVAL OF EXISTING LINER		
MW80	FS 10.1	Remove existing pipe liner under wine tank	Sum	
		BULK CLEANING OF PIPES		
MW90	FS 1.1	Bulk cleaning of siphon pipeline	m	
		MISCELLANEOUS		
MW100	FS 6.1	Construct pits, cut hole in pipe for inserting CCTV camera for inspections, repair hole, backfill and make good	No	
MW110	FS 3.1	CCTV Inspection of existing 375 mm diameter siphon pipeline	m	
MW120	FS 8.1	Proof testing of liner	m	
MW130	FS 11.1	Survey and provide co-ordinates and level of every exposure of siphon pipe	No	
MW140	FS 12.1	Construct additional grouting pit	No	
	FS 9.7.5	Testing of welded joints		
MW150		a) Preparation and approval of Welding Procedure Specification	Sum	
MW160		b) Preparation and approval of Qualification Joint	Sum	
MW170		c) Welded joint tensile strength tests	No	

**SCHEDULE D HORIZONTAL DIRECTIONAL
DRILLING**

CONTENTS	PAGES
SECTION J: HORIZONTAL DIRECTIONAL DRILLING	90-91

**CONTRACT NO. T36/2024 TERM TENDER FOR PIPE REPLACEMENT USING
CONVENTIONAL AND TRENCHLESS METHODS**

SECTION J: HORIZONTAL DIRECTIONAL DRILLING				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
	SASTT-TS-TT3	HORIZONTAL DIRECTIONAL DRILLING		
J10	PS-TT3 1.2.1	HDD establishment on site (a) in Langeberg Municipal Area	Sum	
J20	PS-TT3 1.2.2	HDD installation setup	No	
J30	PS-TT3 1.2.4	Excavation of drilling pits	m ³	
	PS-TT3 1.2.5	HDD installation of pipes		
	PS-TT3-7.1	a) Drilling of pilot bore in sand, clay or shale, for pipe diameter		
J40		a) 110 mm	m	
J50		b) 160 mm	m	
J60		c) 200 mm	m	
J70		d) 250 mm	m	
J80		e) 315 mm	m	
J90		f) 355 mm	m	
J100		g) 400 mm	m	
J110		h) 450 mm	m	
J120		i) 500 mm	m	
	PS-TT3-7.1	b) Supply and delivery to site of HDPE PN 6 PE 100 pipe sleeve		
J130		a) 110 mm	m	
J140		b) 160 mm	m	
J150		c) 200 mm	m	
J160		d) 250 mm	m	
J170		e) 315 mm	m	
J180		f) 355 mm	m	
J190		g) 400 mm	m	
J200		h) 450 mm	m	
J210		i) 500 mm	m	
	PS-TT3-7.1	c) HDD installation of HDPE PN 6 PE 100 pipe sleeve in sand, clay or shale, Butt welding included		
J220		a) 110 mm	m	
J230		b) 160 mm	m	
J240		c) 200 mm	m	
J250		d) 250 mm	m	
J260		e) 315 mm	m	
J270		f) 355 mm	m	
J280		g) 400 mm	m	
J290		h) 450 mm	m	
J300		i) 500 mm	m	
		DRAWING OF PIPES INTO SLEEVES		
	PS-TT3-7.2	1) HDPE PN 12.5 PE 100		
J310		a) Supply and deliver to site HDPE PN 12.5 PE 100 pipe		
J320		a) 110 mm	m	
J330		b) 160 mm	m	
J340		c) 200 mm	m	
J350		d) 250 mm	m	
J360		e) 315 mm	m	
J370		f) 355 mm	m	
		g) 400 mm	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
J380	PS-TT3-7.2	b) Butt weld and install HDPE PN 12.5 PE 100 pipe in pipe sleeve (Including butt welding)		
J390		a) 110 mm	m	
J400		b) 160 mm	m	
J410		c) 200 mm	m	
J420		d) 250 mm	m	
J430		e) 315 mm	m	
J440		f) 355 mm	m	
		g) 400 mm	m	
		2) HDPE PN 16 PE 100		
	PS-TT3-7.2	a) Supply and deliver to site HDPE PN 16 PE 100 pipe		
J450		a) 110 mm	m	
J460		b) 160 mm	m	
J470		c) 200 mm	m	
J480		d) 250 mm	m	
J490		e) 315 mm	m	
J500		f) 355 mm	m	
J510		g) 400 mm	m	
	PS-TT3-7.2	b) Butt weld and install HDPE PN 16 PE 100 pipe in pipe sleeve (Including butt welding)		
J520		a) 110 mm	m	
J530		b) 160 mm	m	
J540		c) 200 mm	m	
J550		d) 250 mm	m	
J560		e) 315 mm	m	
J570		f) 355 mm	m	
J580		g) 400 mm	m	

SCHEDULE E CURED-IN-PLACE-PIPE LINING

CONTENTS	PAGES
SECTION L: CURED-IN-PLACE-PIPE LINING	93-94

**CONTRACT NO. T36/2024 TERM TENDER FOR PIPE REPLACEMENT USING
CONVENTIONAL AND TRENCHLESS METHODS**

SECTION L: CURED-IN-PLACE-PIPE LINING				
ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
		CURED-IN-PLACE-PIPE (CIPP) LINING		
	PS-TB-10.1	SUPPLY AND INSTALL CIPP LINERS		
		1) UN-REINFORCED LINERS		
L10		a) 100 mm diameter x 3.0 mm thick	m	
L20		b) 150 mm diameter x 5.0 mm thick	m	
L30		c) 225 mm diameter x 5.0 mm thick	m	
L40		d) 300 mm diameter x 5.0 mm thick	m	
L50		e) 375 mm diameter x 5.0 mm thick	m	
L60		f) 450 mm diameter x 7.5 mm thick	m	
L70		g) 525 mm diameter x 7.5 mm thick	m	
L80		h) 600 mm diameter x 9.0 mm thick	m	
L90		i) 675 mm diameter x 9.0 mm thick	m	
L100		j) 750 mm diameter x 10.5 mm thick	m	
L110		k) 825 mm diameter x 12.0 mm thick	m	
L120		l) 900 mm diameter x 12.0 mm thick	m	
L130		m) 975 mm diameter x 13.5 mm thick	m	
L140		n) 1050 mm diameter x 15.0 mm thick	m	
L150		o) 1125 mm diameter x 15.0 mm thick	m	
L160		p) 1200 mm diameter x 15.0 mm thick	m	
L170		q) 450 mm diameter x 6.0 mm thick	m	
L180		r) 525 mm diameter x 6.0 mm thick	m	
L190		s) 600 mm diameter x 7.5 mm thick	m	
L200		t) 675 mm diameter x 7.5 mm thick	m	
L210		u) 750 mm diameter x 9.0 mm thick	m	
L220		v) 825 mm diameter x 10.5 mm thick	m	
L230		w) 900 mm diameter x 10.5 mm thick	m	
L240		x) 975 mm diameter x 12.0 mm thick	m	
L250		y) 1050 mm diameter x 12.0 mm thick	m	
L260		z) 1125 mm diameter x 12.0 mm thick	m	
		2) REINFORCED LINERS		
L270		a) 100 mm diameter x 3.0 mm thick	m	
L280		b) 150 mm diameter x 5.0 mm thick	m	
L290		c) 225 mm diameter x 5.0 mm thick	m	
L300		d) 300 mm diameter x 5.0 mm thick	m	
L310		e) 375 mm diameter x 5.0 mm thick	m	
L320		f) 450 mm diameter x 7.5 mm thick	m	
L330		g) 525 mm diameter x 7.5 mm thick	m	
L340		h) 600 mm diameter x 9.0 mm thick	m	
L350		i) 675 mm diameter x 9.0 mm thick	m	
L360		j) 750 mm diameter x 10.5 mm thick	m	
L370		k) 825 mm diameter x 12.0 mm thick	m	
L380		l) 900 mm diameter x 12.0 mm thick	m	
L390		m) 975 mm diameter x 13.5 mm thick	m	
L400		n) 1050 mm diameter x 15.0 mm thick	m	
L410		o) 1125 mm diameter x 15.0 mm thick	m	
L420		p) 1200 mm diameter x 15.0 mm thick	m	
L430		q) 450 mm diameter x 6.0 mm thick	m	
L440		r) 525 mm diameter x 6.0 mm thick	m	
L450		s) 600 mm diameter x 7.5 mm thick	m	
L460		t) 675 mm diameter x 7.5 mm thick	m	
L470		u) 750 mm diameter x 9.0 mm thick	m	
L480		v) 825 mm diameter x 10.5 mm thick	m	

ITEM NO.	PAYMENT	DESCRIPTION	UNIT	RATE
L490		w) 900 mm diameter x 10.5 mm thick	m	
L500		x) 975 mm diameter x 12.0 mm thick	m	
L510		y) 1050 mm diameter x 12.0 mm thick	m	
L520		z) 1125 mm diameter x 12.0 mm thick	m	
L530	PS-TB 10.4	Extra-over items L10 to L520 for fluctuation in exchange rate	Prov Sum	R 100 000.00
L540	PS-TB-10.5	Extra-over items L10 to L520 for installation of CIPP liners in mid-blocks	m	
		CIPP ESTABLISHMENT ON SITE		
L550		(a) in Langeberg Municipal Area	Sum	
L580		Daily Rate for CIPP equipment and accommodation of traffic	Day	
		ROBOT CUTTING		
	PS-TB-10.2	ROBOTIC CUTTING FOR SERVICE RECONNECTIONS		
L590		a) Robotic cutting for reconnections (all sizes)	No	
	PS-TB-10.6	ROBOTIC CUTTING OF PROTRUDING LATERALS		
L600		a) less than or equal to 200 mm diameter	No	
L610		b) larger than 200 mm diameter	No.	
	PS-TB-10.3	REHABILITATION OF EXISTING MANHOLES		
L620		a) 20mm calcium aluminate mortar to internal faces	m ²	
L630		b) Installation of step irons	No	

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

DECLARATION (In respect of completeness of Tender)

Langeberg Municipality
Langeberg Municipal Offices
28 Main Road
Ashton
6715

I/we, the undersigned, do hereby declare that these are the properly priced Schedule of Rates forming Part C2.2 of this Contract Document containing **62** pages in consecutive order upon which my/our tender for **TENDER NO. 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS** has been based. If I/we have submitted a printed version of the Schedules of Rates, I/we warrant that no amendments have been made to it from the original, other than amendments issued in any Addenda in terms of Clause F.3.2 in Part T1.2 Tender Data.

SIGNATURE OF TENDERER/S

DATE

T2.2 RETURNABLE SCHEDULES

NOTE: Certain of the following Returnable Schedules, amended as applicable, will also have to be completed for each Works Project.

In respect of the **Preference Schedule**, which is not included in the Works Project contract document(s) (owing to the fact that the contractor's B-BBEE status level of contribution used will be that which was used in the framework contract tender evaluation), such document(s) do make provision in the Works Project Acceptance/Refusal Notice (refer to Part C1.9 herein) for the declaration in respect of sub-contractors to be made therein and which, as stated elsewhere in such document(s), will supersede declaration 2 in Section 5 of the **Preference Schedule** made in the framework contract.

SCHEDULE 1: COMPULSORY ENTERPRISE QUESTIONNAIRE

**PART A
INVITATION TO BID**

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE (NAME OF MUNICIPALITY/ MUNICIPAL ENTITY)					
BID NUMBER:	T36/2024	CLOSING DATE:	15 NOVEMBER 2024	CLOSING TIME:	
DESCRIPTION	CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).					

BID RESPONSE DOCUMENTS MUST BE DEPOSITED IN THE BID BOX SITUATED AT LANGEBERG MUNICIPALITY, 28 MAIN ROAD, ASHTON 6715				
SUPPLIER INFORMATION				
NAME OF BIDDER				
POSTAL ADDRESS				
STREET ADDRESS				
TELEPHONE NUMBER	CODE		NUMBER	
CELLPHONE NUMBER				
FACSIMILE NUMBER	CODE		NUMBER	
E-MAIL ADDRESS				
VAT REGISTRATION NUMBER				
TAX COMPLIANCE STATUS	TCS PIN:		OR	CSD No:
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT ☐ Yes ☐ No	
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]				
1. ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]		2. ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER PART B:3]
3. TOTAL NUMBER OF ITEMS OFFERED			4. TOTAL BID PRICE	R
5. SIGNATURE OF BIDDER			6. DATE	
7. CAPACITY UNDER WHICH THIS BID IS SIGNED				
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:	
DEPARTMENT	SCM		CONTACT PERSON	Neil Albertyn
CONTACT PERSON	Sabelo Ngcongolo		TELEPHONE NUMBER	023 626 8200
TELEPHONE NUMBER	023 615 8000		FACSIMILE NUMBER	023 615 1563
FACSIMILE NUMBER	023 615 1563		E-MAIL ADDRESS	nalbertyn@langeberg.gov.za
E-MAIL ADDRESS	sngcongolo@langeberg.gov.za			

PART B
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

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

2. TAX COMPLIANCE REQUIREMENTS

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

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

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

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

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

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

DATE:

SCHEDULE 2: MBD9 - CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

1. This Municipal Bidding Document (MBD) must form part of all bids 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).¹ Collusive bidding is a per se prohibition meaning that it cannot be justified under any grounds.
3. Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - 3.1. take all reasonable steps to prevent such abuse;
 - 3.2. 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
 - 3.3. 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:

CERTIFICATE OF INDEPENDENT BID DETERMINATION:

In response to the invitation for the bid made by:

LANGEBERG MUNICIPALITY

I, the undersigned, in submitting the accompanying bid, hereby make the following statements that I certify to be true and complete in every respect:

1. I have read and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - 5.1. has been requested to submit a bid in response to this bid invitation;
 - 5.2. could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - 5.3. provides the same goods and services as the bidder and/or is in the same line of business as

¹ *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.*

the bidder

6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - 7.1. prices;
 - 7.2. geographical area where product or service will be rendered (market allocation)
 - 7.3. methods, factors or formulas used to calculate prices;
 - 7.4. the intention or decision to submit or not to submit, a bid;
 - 7.5. the submission of a bid which does not meet the specifications and conditions of the bid; or
 - 7.6. bidding with the intention not to win the bid.
8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

SIGNATURE:		NAME (PRINT):	
CAPACITY:		DATE:	
NAME OF FIRM:			

² 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.

SCHEDULE 3: CLARIFICATION MEETING CERTIFICATE

I / We*, the undersigned, certify that I / we* have examined the Site for the Works and its surroundings for which I / we* am / are* submitting this Tender and have, as far as practicable possible, familiarized myself / ourselves* with all information, risks, contingencies and other circumstances which may influence or affect my / our* tender.

NAME & SURNAME			
CAPACITY			
NAME OF FIRM			
ADDRESS			
TELEPHONE NO		FAX NO:	
E-MAIL		SIGNATURE	

NB: Please note that no latecomers will be allowed.

*For all compulsory briefing sessions/site meetings/clarification meetings, bids received from interested bidders that did not attend the meeting or arrived later than predetermined date and time, will be **disqualified***

SCHEDULE 4: AUTHORITY TO SIGN A BID

1. SOLE PROPRIETOR (SINGLE OWNER BUSINESS) AND NATURAL PERSON

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

OR

1.2. I, _____, the undersigned, hereby confirm that I am submitting this tender in my capacity as natural person.

SIGNATURE:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	

2. COMPANIES AND CLOSE CORPORATIONS

2.1. **If a Bidder is a COMPANY, a certified copy of the resolution by the board of directors**, duly signed, authorising the person who signs this bid to do so, as well as to sign any contract resulting from this bid and any other documents and correspondence in connection with this bid and/or contract on behalf of the company **must be submitted with this bid**, that is, before the closing time and date of the bid

2.2. In the case of a **CLOSE CORPORATION (CC)** submitting a bid, **a resolution by its members**, authorizing a member or other official of the corporation to sign the documents on their behalf, **shall be included with the bid**.

PARTICULARS OF RESOLUTION BY BOARD OF DIRECTORS OF THE COMPANY/MEMBERS OF THE CC

Date Resolution was taken			
Resolution signed by (name and surname)			
Capacity			
Name and surname of delegated Authorised Signatory			
Capacity			
Specimen Signature			

Full name and surname of ALL Director(s) / Member (s)			
1.		2.	
3.		4.	
5.		6.	
7.		8.	
9.		10.	

Is a CERTIFIED COPY of the resolution attached?		YES		NO	
---	--	-----	--	----	--

SIGNED ON BEHALF OF COMPANY / CC:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	

3. PARTNERSHIP



We, the undersigned partners in the business trading as _____ hereby authorize Mr/Ms _____ to sign this bid as well as any contract resulting from the bid and any other documents and correspondence in connection with this bid and /or contract for and on behalf of the abovementioned partnership.

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

Full name of partner		Signature	
SIGNED ON BEHALF OF PARTNERSHIP:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	

4. CONSORTIUM

We, the undersigned consortium partners, hereby authorize _____ (Name of entity) to act as lead consortium partner and further authorize Mr./Ms. _____ To sign this offer as well as any contract resulting from this tender and any other documents and correspondence in connection with this tender and / or contract for and on behalf of the consortium.

The following particulars in respect of each consortium member must be provided and signed by each member:

Full Name of Consortium Member	Role of Consortium Member	% Participation	Signature
SIGNED ON BEHALF OF PARTNERSHIP:		DATE:	
PRINT NAME:			
WITNESS 1:		WITNESS 2:	

5. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This returnable schedule is to be completed by JOINT VENTURES

We, the undersigned, are submitting this tender offer in joint venture and hereby authorize Mr./Ms. _____

authorized signatory of the Company/Close Corporation/Partnership (name) _____

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

(i) Name of firm (Lead partner)			
Address			
		Tel. No.	
Signature		Designation	

(ii) Name of firm			
Address			
		Tel. No.	
Signature		Designation	

(iii) Name of firm			
Address:			
		Tel. No.	
Signature		Designation	

(iv) Name of firm			
Address			
		Tel. No.	
Signature		Designation	

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

**SCHEDULE 5: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES
(MBD 8)**

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

1. This Municipal Bidding Document must form part of all bids invited.
2. It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
3. The bid of any bidder may be rejected if that bidder, or any of its directors have:
 - 3.1. abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
 - 3.2. been convicted for fraud or corruption during the past five years;
 - 3.3. willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
 - 3.4. been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
4. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

4.1	Is the bidder or any of its directors listed on the National Treasury's database as a company or person prohibited from doing business with the public sector? <i>(Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audi alteram partem rule was applied).</i>	Yes	No
4.1.1	If so, furnish particulars:		
4.2	Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)? <i>(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).</i>	Yes	No
4.2.1	If so, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes	No

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

5. CERTIFICATION

I, the undersigned (full name), _____, certify that the information furnished on this declaration form true and correct.

I accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

SIGNATURE:		NAME (PRINT):	
CAPACITY:		DATE:	
NAME OF FIRM:			

SCHEDULE 6: MBD 4 - DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state¹.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the tenderer or their authorised representative declare their position in relation to the evaluating/adjudicating authority.
3. **In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.**
 - 3.1 Full Name of tenderer or his or her representative:.....
 - 3.2 Identity Number:
 - 3.3 Position occupied in the Company (director, trustee, shareholder²):.....
 - 3.4 Company or Close Corporation Registration Number:
 - 3.5 Tax Reference Number:.....
 - 3.6 VAT Registration Number:
 - 3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
 - 3.8 Are you presently in the service of the state? **YES / NO**
 - 3.8.1 If yes, furnish particulars.
 - 3.9 Have you been in the service of the state for the past twelve months? **YES / NO**
 - 3.9.1 If yes, furnish particulars
 - 3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**
 - 3.10.1 If yes, furnish particulars.
 - 3.11 Are you, aware of any relationship (family, friend, other) between any other supplier and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**
 - 3.11.1 If yes, furnish particulars
 - 3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**
 - 3.12.1 If yes, furnish particulars.....
 - 3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars.

.....

.....

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

3.14.1 If yes, furnish particulars:

.....

.....

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

Full Name	Identity Number	State Employee Number

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

Signature

Date

Name (PRINT)
(For and on behalf of the tenderer, duly authorised)

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

6. a member of –

- 6.1. any municipal council;**
- 6.2. any provincial legislature; or**
- 6.3. the national Assembly or the national Council of provinces;**

7. a member of the board of directors of any municipal entity;

8. an official of any municipality or municipal entity;

9. an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);

10. an executive member of the accounting authority of any national or provincial public entity; or

11. an employee of Parliament or a provincial legislature.

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

SCHEDULE 7: MBD 10 - CERTIFICATE FOR PAYMENT OF MUNICIPAL SERVICES

DECLARATION IN TERMS OF CLAUSE 112(1) OF THE MUNICIPAL FINANCE MANAGEMENT ACT (NO.56 OF 2003)

I, _____, _____ (full name and ID no.), hereby acknowledge that according to SCM Regulation 38(1)(d)(i), the Municipality may reject the tender of the tenderer if any municipal rates and taxes or municipal service charges owed by the Tenderer or any of its directors/members/partners to the Langeberg Municipality, or to any other municipality or municipal entity, are in arrears for more than 3 (three) months.

I declare that I am duly authorised to act on behalf of _____ (name of the firm) and hereby declare, that to the best of my personal knowledge, neither the firm nor any director/member/partner of said firm is in arrears on any of its municipal accounts with any municipality in the Republic of South Africa, for a period longer than 3 (three) months.

I further hereby certify that the information set out in this schedule and/or attachment(s) hereto is true and correct. The Tenderer acknowledges that failure to properly and truthfully complete this schedule may result in the tender being disqualified, and/or in the event that the tenderer is successful, the cancellation of the contract.

PHYSICAL BUSINESS ADDRESS(ES) OF THE TENDERER	MUNICIPAL ACCOUNT NUMBER

FURTHER DETAILS OF THE BIDDER'S Director / Shareholder / Partners, etc.:

Director / Shareholder / partner	Physical address of the Business	Municipal Account number(s)	Physical residential address of the Director / shareholder / partner	Municipal Account number(s)

NB: Please attach certified copy (ies) of ID document(s) and Municipal Accounts If the entity or any of its Directors/Shareholders/Partners, etc. rents/leases premises, a copy of the rental/lease agreement or sworn affidavit must be submitted with this tender.

- PLEASE SUBMIT MUNICIPAL ACCOUNTS FOR THE FOLLOWING TWO MONTHS AFTER BID CLOSURE TO THE RELEVANT SCM PRACTITIONER SHOULD THE BID NOT BE AWARDED YET.

Signature	Position	Date

SCHEDULE 8: COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993 (ACT 130 OF 1993)

COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT, 1993 (ACT 130 OF 1993)

Langeberg Municipality has legal duty in terms of Section 89 of the said Act to ensure that all contractors with whom agreements are entered into for the execution of work are registered as employers in accordance with the provisions of this Act and that all the necessary assessments have been paid by the contractor.

In order to enter into this agreement, the following information is needed regarding the above-mentioned:

Contractor's registration number with the office of the Compensation Commissioner:

NOTE:

A copy of the latest receipt together with a copy of the relevant assessment OR a copy of a valid Letter of Good Standing must be handed in, in this regard.

PRINT NAME:			
CAPACITY:		Name of firm	
SIGNATURE:		DATE:	

SCHEDULE 9: CONFIRMATION OF SUPPLIER DATABASE REGISTRATION

NATIONAL TREASURY VENDOR DATABASE REGISTRATION		
COMPANY NAME	REGISTERED YES/NO	REGISTRATION NUMBER

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 10: CERTIFICATE OF REGISTRATION WITH CIDB

CIDB Contractor Registration Certificate

A Certificate of Contractors Registration issued by the Construction Industry Development Board (CIDB) shall be attached to this schedule.

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

Number of sheets appended by the tenderer to this schedule (If nil, enter NIL)		
CRS Number:		

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			

SCHEDULE 11: CONFIRMATION OF REGISTRATION AS AN ASBESTOS CONTRACTOR

CONFIRMATION OF REGISTRATION AS AN ASBESTOS CONTRACTOR WITH THE DEPARTMENT OF LABOUR

Tenderers will be declared non-responsive if the tenderer has failed to submit with his/her submission or within 7 days of request proof of registration as an Asbestos Contractor with the Department of Labour (DoL) in accordance with Asbestos Regulations GNR. 155 as specified. **Please see Clause F.2.1.4.4.**

ASBESTOS CONTRACTOR REGISTRATION		
COMPANY NAME	REGISTERED YES/NO	REGISTRATION NUMBER IF APPLICABLE

In this regard it is the sole responsibility of tenderers to ensure that this requirement is complied with. In the case of Joint Venture Partnerships this requirement will apply to each party to the Joint Venture. **The use of sub-contractors will not be allowed.**

Certificate should be attached hereto by the tenderer to this Schedule.

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 12: SCHEDULE OF WORK EXPERIENCE OF TENDERER

The tenderer shall insert in the spaces provided below a list of completed contracts relevant to the respective panel which have been executed in built-up residential/industrial areas and have successfully achieved completed. Projects with a minimum pipe size of 100 mm nominal diameter will be considered. **See Tender Data F.2.1.4.3.**

Functionality Criteria	Functionality Area	Point Allocation	Max Weighting
CRITERIA 1: Tendering Company has experience in the rehabilitation works associated with the relevant panel			
PANEL 1: Water Reticulation The Tenderer must have completed potable water reticulation pipe rehabilitation projects of a similar nature (Refer to Schedule 12)	Conventional Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through pipe bursting methods equal or greater to 110mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
	Sliplining Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through Sliplining methods equal or greater to 110mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
PANEL 2: Sewer Reticulation The Tenderer must have completed sewer reticulation pipe rehabilitation projects of a similar nature (Refer to Schedule 12)	Conventional Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through pipe bursting methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 5 projects)	2 points per project completed	20
PANEL 3: Cured-in-Place-Pipe The Tenderer must have completed pipe rehabilitation by CIPP methods. (Refer Schedule 12)	Indicate previous project experience in the rehabilitation of sewer reticulation pipes through CIPP installation methods, equal or greater to 100mm dia. size AND 50m of installation length (minimum of 5 projects)	2 points per project completed	20

There should be an element of excavations for point repairs requiring shoring contained in at least one the projects for each of the construction methods in each panel.

PANEL 1: WATER RETICULATION - CONVENTIONAL OPEN CUT TRENCH - WATERMAINS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 6: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 1: WATER RETICULATION – PIPE BURSTING/CRACKING

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 1: WATER RETICULATION – SLIPLINING

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 6: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 2: SEWER RETICULATION - CONVENTIONAL OPEN CUT TRENCH

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 2:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 3:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 4:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 2: SEWER RETICULATION – PIPEBURSTING/CRACKING

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 3: CURED-IN-PLACE-PIPE (CIPP) LINING – (SEWER RETICULATION ONLY)

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 2:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 3:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 4:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 14: DETAILS OF QUALIFICATIONS AND STAFF EXPERIENCE OF STAFF

DETAILS OF CONTRACTS MANAGER EXPERIENCE

The tenderer shall insert in the spaces provided below a list of completed contracts by the Contracts Manager and Construction Manager relevant to the respective panel which have been executed in built-up residential/industrial areas and have successfully achieved completed. Projects with a minimum pipe size of 100 mm nominal diameter will be considered. See Tender Data F.2.1.4.3.

Functionality Criteria	Functionality Area	Point Allocation	Max Weighting
CRITERIA 2: Tenderer has the following key personnel:			
2.1: Contracts Manager			
PANEL 1: Water Reticulation The Contracts Manager must have completed potable water reticulation pipe rehabilitation projects of a similar nature, (Refer to Schedule 14)	Conventional Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Sliplining Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through Sliplining methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
PANEL 2: Sewer Reticulation The Contracts Manager must have completed sewer reticulation pipe rehabilitation projects of a similar nature. (Refer to Schedule 14)	Conventional Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10

PANEL 3: Cured-in-Place-Pipe The Contracts Manager must have completed pipe rehabilitation by CIPP methods. (Refer Schedule 14)	Indicate previous project experience in the rehabilitation of sewer reticulation pipes through CIPP installation methods, equal or greater to 100mm dia. size AND 50m of installation length (minimum of 3 projects)	2 points per project completed	10
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PANEL 1: WATER RETICULATION CONVENTIONAL OPEN CUT TRENCH

CONTRACTS MANAGER	NAME: NUMBER YEARS EXPERIENCE AS CONTRACTS MANAGER IN SEWER AND WATER INFRASTRUCTURE PROJECTSYEARS
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EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

PANEL 1: PIPEBURSTING – WATERMAINS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

PANEL 1: SLIPLINING – WATERMAINS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 2: SEWER RETICULATION - CONVENTIONAL OPEN CUT TRENCH

CONTRACTS MANAGER	NAME:
	NUMBER YEARS EXPERIENCE AS CONTRACTS MANAGER IN SEWER AND WATER INFRASTRUCTURE PROJECTS YEARS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 2:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 3:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 4:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

PANEL 2: SEWER RETICULATION PIPEBURSTING/CRACKING

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 3: CURED-IN-PLACE-PIPE (CIPP) LINING – (SEWER RETICULATION ONLY)

CONTRACTS MANAGER	NAME:
	NUMBER YEARS EXPERIENCE AS CONTRACTS MANAGER IN CIPP SEWER INFRASTRUCTURE PROJECTS YEARS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 2:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 3:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 4:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

DETAILS OF SITE AGENT/CONSTRUCTION MANAGER'S EXPERIENCE

The tenderer shall insert in the spaces provided below a list of completed contracts by the Contracts Manager and Construction Manager relevant to the respective panel which have been executed in built-up residential/industrial areas and have successfully achieved completed. Projects with a minimum pipe size of 100 mm nominal diameter will be considered. See Tender Data F.2.1.4.7.2.

Functionality Criteria	Functionality Area	Point Allocation	Max Weighting
CRITERIA 2: Tenderer has the following key personnel:			
2.2: Site Agent/Construction Manager			
PANEL 1: Water Reticulation The Site Agent/Construction Manager must have completed potable water reticulation pipe rehabilitation projects of a similar nature. (Refer to Schedule 14)	Conventional Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through conventional trenching methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Sliplining Methods: Indicate previous project experience in the rehabilitation of water reticulation pipes through Sliplining methods, equal or greater to 110mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
PANEL 2: Sewer Reticulation The Site Agent/Construction Manager must have completed sewer reticulation pipe rehabilitation projects of a similar nature. (Refer to Schedule 14)	Conventional Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
	Pipe Bursting Methods: Indicate previous project experience in the rehabilitation of sewer reticulation pipes through conventional trenching methods, equal or greater to 100mm dia. size AND 300m of installation length (minimum of 3 projects)	2 points per project completed	10
PANEL 3: Cured-in-Place-Pipe The Site Agent/Construction Manager must have completed pipe rehabilitation by CIPP methods. (Refer Schedule 14)	Indicate previous project experience in the rehabilitation of sewer reticulation pipes through CIPP installation methods, equal or greater to 100mm dia. size AND 50m of installation length (minimum of 3 projects)	2 points per project completed	10

The proposed Site Agent / Construction Manager will be required to be present on site at all times when works are being executed.

PANEL 1: WATER RETICULATION - CONVENTIONAL OPEN CUT TRENCH

SITE AGENT / CONSTRUCTION MANAGER	NAME:
	NUMBER YEARS EXPERIENCE AS SITE AGENT / CONSTRUCTION MANAGER IN SEWER AND WATER INFRASTRUCTURE PROJECTS YEARS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 1: WATER RETICULATION PIPEBURSTING/CRACKING

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

PANEL 1: WATER RETICULATION SLIPLINING

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 2: SEWER RETICULATION - CONVENTIONAL OPEN CUT TRENCH

SITE AGENT / CONSTRUCTION MANAGER	NAME:
	NUMBER YEARS EXPERIENCE AS SITE AGENT / CONSTRUCTION MANAGER IN SEWER AND WATER INFRASTRUCTURE PROJECTS YEARS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 2:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 3:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 4:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 2: SEWER RETICULATION – PIPEBURSTING/CRACKING

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 5: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

PANEL 3: CURED-IN-PLACE-PIPE (CIPP) LINING – (SEWER RETICULATION ONLY)

SITE AGENT / CONSTRUCTION MANAGER	NAME:
	NUMBER YEARS EXPERIENCE AS SITE AGENT / CONSTRUCTION MANAGER IN CIPP SEWER INFRASTRUCTURE PROJECTS YEARS

EMPLOYER (NAME, TEL No. AND EMAIL ADDRESS)	NATURE OF WORK	PIPE SIZE(S)	LENGTH (m)	MAXIMUM DEPTH OF EXCAVATION (m)	SHORING USED (YES/NO)	COMPLETION DATE
COMPLETED CONTRACTS						
Employer 1: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 2: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 3: Contact Person: Tel No. Email:	Contract Number: Description:					
Employer 4: Contact Person: Tel No. Email:	Contract Number: Description:					

Employer 5:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 6:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 7:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 8:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 9:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						
Employer 10:	Contract Number:					
Contact Person:	Description:					
Tel No.						
Email:						

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

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 15: SCHEDULE OF TRENCHLESS EQUIPMENT AND DETAILS

PART 1 - EQUIPMENT AND DETAILS FOR CURED-IN-PLACE-PIPE (CIPP) LINING (PANEL 3)

Tenderers are to fully complete the following table with the relevant information in the spaces provided. The tenders will be evaluated on this information and attachments will not be considered If space is insufficient duplicate forms may be appended. Incomplete schedules may not be considered.

Tenderers shall have the necessary equipment and capability for Cured-In-Place Pipe (CIPP) lining to be eligible for this panel.

CONTRACTOR	
LINING SUBCONTRACTOR	
Address	
CURED-IN-PLACE PIPE LINING EQUIPMENT.	
LOCATION OF EQUIPMENT FOR INSPECTION	
LINING MANUFACTURER	
Address	
Where will lining be manufactured	
Lining material (Reinforced/Unreinforced)	
RESIN MANUFACTURER	
Where will resin be manufactured	
Resin type	
Where will lining be wetted out	
Curing Method	

PART 2 - EQUIPMENT AND DETAILS FOR PIPEBURSTING (PANEL 1 AND 2)

Tenderers are to fully complete the following table with the relevant information in the spaces provided. The tenders will be evaluated on this information and attachments will not be considered. If space is insufficient duplicate forms may be appended. Incomplete schedules may not be considered.

Tenderers shall have the necessary equipment for Pipe Bursting and a Certified Butt Welder to be eligible for this panel.

CONTRACTOR	
MANUFACTURER OF HDPE PIPES	
TYPE AND DESCRIPTION OF PIPEBURSTING EQUIPMENT	
LOCATION OF EQUIPMENT FOR INSPECTION	
TYPE AND DESCRIPTION OF BUTT WELDING EQUIPMENT	
LOCATION OF EQUIPMENT FOR INSPECTION	
NAME OF BUTT WELDER Test Certificate in accordance with SASTT-TS-TT1 Clause 4.1.1b)(ii) to be attached to Schedule	

PART 3 - EQUIPMENT AND DETAILS FOR HORIZONTAL DIRECTIONAL DRILLING (PANEL 1)

Tenderers are to fully complete the following table with the relevant information in the spaces provided. The tenders will be evaluated on this information and attachments will not be considered. If space is insufficient duplicate forms may be appended. Incomplete schedules may not be considered.

CONTRACTOR / SUBCONTRACTOR	
MANUFACTURER OF HDPE PIPES	
TYPE AND DESCRIPTION OF HDD DRILLING MACHINE	
TYPE AND DESCRIPTION OF BUTT WELDING EQUIPMENT	
NAME OF BUTT WELDER Test Certificate in accordance with SASTT-TS-TT1 Clause 4.1.1b)(ii) to be attached to Schedule	

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 16: MBD 5 - DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

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

1. Are you by law required to prepare annual financial statements for auditing?	YES		NO	
1.1. If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.				
2. Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days?	YES		NO	
2.1. If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.				
2.2. If yes, provide particulars.				
3. Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?	YES		NO	
3.1. If yes, furnish particulars				
4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	YES		NO	
4.1 If yes, furnish particulars				
CERTIFICATION I, the undersigned (name), _____ certify that the information furnished on this declaration form is correct. I accept that the state may act against me should this declaration prove to be false.				
SIGNATURE		DATE		
NAME (PRINT)				
CAPACITY				
NAME OF FIRM				

SCHEDULE 17: SCHEDULE OF SUB-CONTRACTORS

I/we the tenderer, notify the Langeberg Municipality that it is our intention to employ the following Subcontractors for work in this contract.

SUBCONTRACTORS				
Category / Type	Subcontractor Name; Address; Contact Person; Tel. No.		Items of work (pay items) to be undertaken by the Subcontractor	Estimated cost of Work (Rand)
1.	Name of firm			
	Contact person			
	Tel No			
	Address			
2.	Name of firm			
	Contact person			
	Tel No			
	Address			
3.	Name of firm			
	Contact person			
	Tel No			
	Address			
4.	Name of firm			
	Contact person			
	Tel No			
	Address			
5.	Name of firm			
	Contact person			
	Tel No			
	Address			
Number of sheets appended by the tenderer to this schedule (If nil, enter NIL)				

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

SIGNATURE		NAME (PRINT)	
CAPACITY		DATE	
NAME OF FIRM			

SCHEDULE 18: HEALTH AND SAFETY PLAN

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

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

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 17: PROPOSED DEVIATIONS AND QUALIFICATIONS BY TENDERER

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

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

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

PAGE	CLAUSE OR ITEM	PROPOSED DEVIATION OR QUALIFICATION

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

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 20: FUNCTIONALITY CRITERIA

The Tenderer shall provide information for the functionality criteria listed in Returnable Schedule 12 and 14.

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

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

SCHEDULE 21: REGIONS OF PREFERENCE

Not applicable to this tender.

*** State Customs Duty Tariff Reference for each item**

Note that any Plant and Materials not inserted in this schedule shall be deemed to be manufactured in South Africa for the purposes of Contract Price Adjustment. The BASE DATE referred to in column (B) will be 7 calendar days before tender closing.

SIGNED ON BEHALF OF TENDER:

SCHEDULE 23: RECORD OF ADDENDA TO TENDER DOCUMENTS

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

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

Attach additional pages if more space is required.

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 24: MBD6.1 – PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022 – PURCHASES/SERVICES 80/20 or 90/10

NB:

Before completing this form, bidders must study the general conditions, definitions and directives applicable in respect of B-BBEE, as prescribed in the Preferential Procurement Regulations, 2022 and the Langeberg Preferential Procurement Policy 2022/23

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution and any other applicable preference

1. 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

- a) The value of this bid is estimated to not exceed R50 000 000 (all applicable taxes included) and therefore the 80/20 preference point system shall be applicable

1.3 Points for this bid shall be awarded for:

- (a) Price;
- (b) B-BBEE Status Level of Contributor. and
- (c) Locality of supplier

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

	POINTS
PRICE	80
B-BBEE STATUS LEVEL OF CONTRIBUTOR	10
LOCALITY (See definitions)	10
Total points for Price, BBEE and Locality (must not exceed 100)	100

1.5 Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

Failure on the part of a bidder to submit proof of Locality together with the bid, will be interpreted

1.6 to mean that preference points for Locality are not claimed.

1.7 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.

2. DEFINITIONS

- (a) **“B-BBEE”** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (b) **“B-BBEE status level of contributor”** means the B-BBEE status of an entity in terms of a code of good practice on black economic empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (c) **“bid”** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of goods or services, through price quotations, advertised competitive bidding processes or proposals;
- (d) **“Broad-Based Black Economic Empowerment Act”** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (e) **“EME”** means an Exempted Micro Enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (f) **“functionality”** means the ability of a tenderer to provide goods or services in accordance with specifications as set out in the tender documents.
- (g) **“Locality”** means the local suppliers and/or service providers that business offices are within the Municipal area of Langeberg (WC026).
- (h) **“price”** includes all applicable taxes less all unconditional discounts;
- (i) **“proof of B-BBEE status level of contributor”** means:
 - 1) B-BBEE Status level certificate issued by an authorized body or person;
 - 2) A sworn affidavit as prescribed by the B-BBEE Codes of Good Practice;
 - 3) Any other requirement prescribed in terms of the B-BBEE Act;
- (j) **“QSE”** means a qualifying small business enterprise in terms of a code of good practice on black economic empowerment issued in terms of section 9 (1) of the Broad-Based Black Economic Empowerment Act;
- (k) **“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;
- (l) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

4. POINTS AWARDED FOR PRICE

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

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

80/20

or

90/10

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

Where

P_s = Points scored for price of bid under consideration

P_t = Price of bid under consideration

P_{min} = Price of lowest acceptable bid

4.2 FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME-GENERATING PROCUREMENT

4.3 POINTS AWARDED FOR PRICE

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

80/20

or

90/10

$$P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) \text{ or } P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$$

Where

P_s = Points scored for price of bid under consideration

P_t = Price of bid under consideration

P_{max} = Price of highest acceptable bid

5. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTOR

5.1 In terms of Regulation 4 (2) and 5 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining a specific goal specified for the tender

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

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

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

(b) Promotion of enterprises located in the municipal area (WCO26)

5.4 Regarding par 5.3 (a) at least 50% of the 20/10 points must be allocated to promote this goal and points will be allocated in terms of the BBEE scorecard as follows.

B-BBEE Status Level of Contributor	Number of Points for 80/20 Preference Points System	Number of Points for 90/10 Preference Points System
1	20	10
2	18	9
3	14	8
4	12	5
5	8	4
6	6	3
7	4	2
8	2	1
Non-compliant contributor	0	0

- 5.5 A tenderer must submit proof of its BBEE status level contributor.
- 5.6 A tenderer failing to submit proof of BBEE status level of contributor –
- 5.6.1 may only score in terms of the 80/90-point formula for price; and
- 5.6.2 scores 0 points out of 10/5 BBEE status level of contributor, which is in line with section 2 (1) (d) (i) of the Act, where the supplier or service provider did not provide proof thereof.
- 5.7 Regarding par 5.3 (b) a maximum of 50% of the 20/10 points must be allocated to promote this goal. Maximum points will be allocated as follows.

Locality of supplier	Number of Points for 80/20 Preference Points System	Number of Points for 90/10 Preference Points System
Within the boundaries of the municipality	10	5
Outside of the boundaries of the municipality	0	0

6. BID DECLARATION

- 6.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution and/or Locality must complete the following:

7. B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 4.1

- 7.1 B-BBEE Status Level of Contributor: = (maximum of 10 or 20 points)
- (Points claimed in respect of paragraph 7.1 must be substantiated by relevant proof of B-BBEE status level of contributor.)

7.2 Within the boundaries of Langeberg Municipality (WC024)?

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

Business Address -

.....

.....

(Points claimed in respect of paragraph 7.2 must be substantiated by relevant proof that the business premises is situated in the Municipal area of Langeberg (WC026). A valid municipal account or proof of valid lease agreement, or sworn affidavit must be attached)

8. SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted?

(*Tick applicable box*)

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

8.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE

(*Tick applicable box*)

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

v) Specify, by ticking the appropriate box, if subcontracting with an enterprise

Designated Group: An EME or QSE which is at last 51% owned by:	EME √	QSE √
Black people		
Black people who are youth		
Black people who are women		
Black people with disabilities		
Black people living in rural or underdeveloped areas or townships		
Cooperative owned by black people		
Black people who are military veterans		
OR		
Any EME		
Any QSE		

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm:.....

9.2 VAT registration number:.....

9.3 Company registration number:.....

9.4 TYPE OF COMPANY/ FIRM



- ☐ Partnership/Joint Venture / Consortium
 - ☐ One person business/sole propriety
 - ☐ Close corporation
 - ☐ Company
 - ☐ (Pty) Limited
- [TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

.....

9.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
 - ☐ Supplier
 - ☐ Professional service provider
 - ☐ Other service providers, e.g. transporter, etc.
- [TICK APPLICABLE BOX]

9.7 MUNICIPAL INFORMATION

Municipality where business is situated:

Registered Account Number:

Stand Number:.....

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

9.9 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 B-BBE status level of contributor indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, 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 paragraphs 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If the B-BBEE status level of contributor/Locality points has 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 have –
 - (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) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury 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.

SIGNATURE OF BIDDER(S):			
WITNESS 1:		WITNESS 2:	
DATE:			
ADDRESS:			

SCHEDULE 25: FORM OF INDEMNITY

INDEMNITY

Given by (Name of Company) _____ of
(registered address of Company) _____ a
company incorporated with limited liability according to the Company Laws of the Republic of South Africa
(hereinafter called the Contractor), represented herein by (Name of Representative) _____ in his
capacity as (Designation) _____ of the
Contractor, is duly authorised hereto by a resolution dated _____ /20____, to sign
on behalf of the Contractor.

WHEREAS the Contractor has entered into a Contract dated _____ / 20____,
with the Municipality who require this indemnity from the Contractor.

NOW THEREFORE THIS DEED WITNESSES that the Contractor does hereby indemnify and hold harmless
the Municipality in respect of all loss or damage that may be incurred or sustained by the Municipality by
reason of or in any way arising out of or caused by operations that may be carried out by the Contractor in
connection with the aforementioned contract; and also in respect of all claims that may be made against the
Municipality in consequence of such operations, by reason of or in any way arising out of any accidents or
damage to life or property or any other cause whatsoever; and also in respect of all legal or other expenses
that may be incurred by the Municipality in examining, resisting or settling any such claims; for the due
performance of which the Contractor binds itself according to law.

SIGNATURE OF CONTRACTOR:	
DATE:	
SIGNATURE OF WITNESS 1:	
DATE:	
SIGNATURE OF WITNESS 2:	
DATE:	

SCHEDULE 26: INFORMATION TO BE PROVIDED WITH THE TENDER

See Schedules 26A and 26B.

SCHEDULE 26A: DETAILED WORK PLAN (USED AT WORK PROJECT STAGE, if required)

Part A: Applicable Standards

Provide any applicable Standards, Technical Specification of the manufacturer, supplier and material, in addition to the specifications in this document shall be stated below:

Part B: DETAILED WORK PLAN

The tenderer shall submit details of the methodology which he/she plans to apply to this contract.

The tenderer is expected to demonstrate his understanding of the particular requirement of the works project

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 26B: CONTRACTOR CAPACITY CHECKLIST (To be completed at Works Project Stage)

Name of Contractor:

No. of Works Projects in Progress:
(For this and other TERM Tenders)

PERFORMANCE SUMMARY OF WORK PROJECTS IN PROGRESS (For each of the current Works Projects in Progress)

ITEM	DETAIL	COMMENT
Works Project Name and Number		
Start Date		
Finish Date		
Value of Works (Excl. VAT)		
Amount Claimed to date (Excl. VAT)		
Current Progress (% Complete)		
Name and Identity Number of Site Foreman		
Number of Staff on Site		
Name of Internal District Project Manager and Comment		
Internal Project Manager's Signature and Date		

PROPOSED RESOURCES ALLOCATION FOR THE CURRENT TENDERED WORKS PROJECT

ITEM	DETAIL	COMMENT
Availability of Site Foreman	Yes/No	
Name and Identity Number of Site Foreman		
Number of Years of relevant experience of Site Foreman		
Available Owned plant		
Available Hired Plant		

SIGNED ON BEHALF OF TENDERER:

TENDER NO. T36/2024



CONTRACT DOCUMENT (PANEL TYPE)

FOR THE

TENDER 36/2024: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS,

Panel Contract Period: expires 30 June 2027

Works Projects: Above R0 up to R20 000 000

VOLUME 4: RETURNABLE DOCUMENTS

Issued by:	Enquiries regarding specifications:	Enquiries about SCM requirements:
Municipal Manager Langeberg Municipality, 28 Main Road Ashton, 6705	Neil Albertyn Manager: Project Management nalbertyn@langeberg.gov.za 023 626 8200	Sabelo Ngcongolo Manager: Supply Chain Management sngcongolo@langeberg.gov.za 023 615 8000

2024

Name of Tenderer	
Email Address	
Tel: Number	

Part C1: Agreements and Contract Data

	Pages
C1.2 Contract Data (data provided by the Employer)	179 – 200
C1.3 Form of Performance Guarantee.....	201 – 204
C1.4 Form of Advance Payment Guarantee (not used).....	205 – 208
C1.5 Occupational Health and Safety Agreement	209
C1.6 Protection of the Environment Declaration.....	210
C1.7 Insurance Broker's Warranty	211
C1.8 Contract of Temporary Employment as Community Liaison Officer	212-214
C1.9 Works Project Acceptance/Refusal Notice	215

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.2 Contract Data

Part 1: Contract Data provided by the Employer

GENERAL CONDITIONS OF CONTRACT

The following standardised General Conditions of Contract:

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

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

Copies of the General Conditions of Contract are available for inspection and scrutiny at the offices of the Employer.

The Pro-formas bound with the General Conditions of Contract 2015, on pages 96 to 110 shall not apply to this Contract and shall be replaced with the documentation bound into this Contract Document.

The General Conditions of Contract make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the general conditions of contract.

The General Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Contract Specific Data below. Each item of data given below is cross-referenced to the clause in the General Conditions of Contract to which it mainly applies.

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence.

- a) the Form of Offer and Acceptance,
- b) the Contract Specific Data within the Contract Data,
- c) the General Conditions of Contract for Construction Works, Third Edition, 2015,
- d) the Drawings,
- e) the Scope of Work,
- f) the Pricing Data, and
- g) the conditions of tender, the tender data and tender schedules.

If an ambiguity or discrepancy is found in the documents, the Employer's Agent shall issue any necessary clarification or instruction.

CONTRACT SPECIFIC DATA

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

Clause 1.1.1.2:

Add the following after "Bill of Quantities":

, also referred to as Bills of Quantities,

Clause 1.1.1.7:

Add the following after "Contract" and before "means":

Contract
Part C1: Agreements and Contract Data
Reference No. T36/2024

179

C1.2
Contract Data

, also referred to as Framework Contract or term tender contract,

Add the following after “Acceptance,”:

including, if applicable, the Form of Offer and Acceptance in a Works Project contract document, in which case “Contract” includes the Works Project contract,

Clause 1.1.1.11:

Add the following after “Acceptance”:

... of a Works Project.

The Contract Sum for each Works Project shall not exceed R20 million (including contingencies and VAT).

Clause 1.1.1.13:

The Defects Liability Period is **12** months per Works Project.

Clause 1.1.1.14:

Delete “Commencement Date” and replace with:

date specified in the Works Project contract for commencement with Works execution,

The time for achieving Practical Completion, inclusive of non-working days referred to in Clause 5.8.1 below, but exclusive of special non-working days (Clause 5.8.1), will be determined for each Works Project as specified in the Works Project contract document.

Clause 1.1.1.15:

The **Employer** is the LANGEBERG MUNICIPALITY, represented by the Director Engineering Services, or such other named in the Works Project contract document(s), and/or such other person or persons duly authorised thereto by the Employer in writing.

The name of the Employer is: LANGEBERG MUNICIPALITY

and is referred to in the Contract documents by the terms “Employer”, “Langeberg Municipality” or “Council” as the context provides.

Clause 1.1.1.16:

Add the following after “Contract Data”:

in the Works Project contract document,

The name of the Employer’s Agent will be stated in the Works Project contract document(s) and who may be an employee of the Employer or, alternatively, may be an independent agent appointed by the Employer.

Clause 1.1.1.20

Add the following after “Contract”:

and also includes the Form of Offer and Acceptance applicable in each Works Project contract document.

Clause 1.1.1.26:

The Pricing Strategy is a Re-measurement Contract.

Clause 1.1.1.28:

The Scope of Work in this Framework Contract document is applicable, as relevant, together with the project specific Scope of Work in each Works Project contract document.

Clause 1.1.1.33:

The “Works” applies to the Works Projects individually or as a whole, as the context provides.

Add the following Clauses after Clause 1.1.1.34:

- 1.1.1.35 **"Drawings"** means all drawings, calculations and technical information forming part of the Contract documents and any modifications thereof or additions thereto from time to time approved in writing by the Employer's Agent or delivered to the Contractor by the Employer's Agent.
- 1.1.1.36 **"Framework Contract"** means the Contract as defined in Clause 1.1.1.7; and **"Framework Contract Period"** means the period stated in the Contract Data, during which Works Projects may be allocated to the Contractor and for which Purchase Orders may be raised (issued) up until the expiry of the period; provided that the Framework Contract shall continue to remain in force after the expiration of the Framework Contract Period until the Final Approval Certificate has been issued by the Employer's Agent for the last outstanding Works Project at the expiration of the Defects Liability Period of that Works Project.
- 1.1.1.37 **"Framework Contract Manager"** means the person named as the Framework Contract Manager in the Contract Data or any other person appointed from time to time by the Employer and of whom the Contractor is notified, in writing, to act as Framework Contract Manager for the purposes of the Contract as substitute for the Framework Contractor Manager so named.

The function of the Framework Contract Manager is to administer the Framework Contract, and such functions as would normally fall to the Employer's Agent in accordance with the provisions of the Framework Contract, shall be undertaken by the Framework Contract Manager in this regard.

The Framework Contract Manager shall be an employee of the Employer, authorised as its representative to administer the Framework Contract, and all references to "Employer's Agent" in the Contract shall apply to the Framework Contract Manager in respect of his/her administering the Framework Contract.

The Framework Contract Manager is:

Name: Mr NW Albertyn
Address: Langeberg Municipality
 Project Management
 52 Kerk St
 Robertson
Tel: 023 626 8200
E-mail: nalbertyn@langeberg.gov.za

- 1.1.1.38 **"Letter of Notification"** means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers. The notification of the decision does not form part of the Employer's Acceptance of a successful tenderer's Offer and no rights shall accrue.
- 1.1.1.39 **"Panel"** means a number of contractors, of which the Contractor is one, appointed by the Employer under the Framework Contract to be available to execute Works Projects using a particular method of construction as and when they arise.
- 1.1.1.40 **"Purchase Order"** means the official purchase order created and released by the Langeberg Municipality.
- 1.1.1.41 **"Schedules of Rates"** means, in this Framework Contract document, the document so designated in the Pricing Data, and which will be used to compile Bills of Quantities in the Works Project contract document(s).
- 1.1.1.42 **"Works Project"** means a part of the Works to be performed (task) by a Contractor under the Contract, the specific terms, conditions and scope of the Works Project contract being specified in a Works Project contract document.
- 1.1.1.43 **"Works Project Acceptance/Refusal Notice"** means the formal notification, signed by the successful tenderer/prospective Contractor and sent to the Employer, of his decision to accept/ refuse the opportunity afforded to participate further in the Contractor appointment procedure for a Works Project as specified in the Contract.
- 1.1.1.43 **"Intellectual Property"** means any and all intellectual property rights of any nature anywhere in the world whether registered, registerable or otherwise, including patents, trademarks, registered designs and domain names, applications for any of the foregoing, trade or business names, copyright and rights in the nature of copyright, design rights, rights in databases, know-how, trade secrets and any other intellectual property rights which

subsist in computer software, computer programs, websites, documents, information, techniques, business methods, drawings, logos, instruction manuals, lists and procedures and particulars of customers, marketing methods and procedures and advertising literature, including the "look and feel" of any websites

Clause 1.2.1.2:

The address of the Employer is:

Physical address: Langeberg Municipal Offices
28 Main Road
Ashton
6705

Postal address: Private Bag X2
Ashton
6715

E-mail address: mm@langeberg.gov.za

The address of the Employer's Agent will be stated in the Works Project contract document(s).

Clause 1.3:

Delete Clause 1.3.5 in its entirety and replace with the following:

1.3.5 Intellectual Property

1.3.5.1 The Contractor acknowledges that it shall not acquire any right, title or interest in or to the Intellectual Property of the Employer.

1.3.5.2 The Contractor hereby assigns to the Employer, all Intellectual Property created, developed or otherwise brought into existence by it for the purposes of the contract, unless the Parties expressly agree otherwise in writing.

1.3.5.3 The Contractor shall be deemed to have given the Employer a non-terminable, transferable, non-exclusive, royalty-free licence to copy, use and communicate the Contractor's documents, including making and using modifications of such documents for further work required to the Works.

1.3.5.4 The Contractor shall, and warrants that it shall:

1.3.5.4.1 not be entitled to use the Employer's Intellectual Property for any purpose other than as contemplated in this contract;

1.3.5.4.2 not modify, add to, change or alter the Employer's Intellectual Property, or any information or data related thereto, nor may the Contractor produce any product as a result of, including and/or arising from any such information, data and Intellectual Property, and in the event that it does produce any such product, the product shall be, and be deemed in law to be, owned by the Employer;

1.3.5.4.3 not apply for or obtain registration of any domain name, trademark or design which is similar to any Intellectual Property of the Employer;

1.3.5.4.4 comply with all reasonable directions or instructions given to it by the Employer in relation to the form and manner of use of the Employer Intellectual Property, including without limitation, any brand guidelines which the Employer may provide to the contractor from time to time;

1.3.5.4.5 procure that its employees, directors, members and contractors comply strictly with the provisions of clauses 1.3.5.4.1 to 1.3.5.4.3 above;

unless the Employer expressly agrees thereto in writing after obtaining due internal authority.

1.3.5.5 The Contractor represents and warrants to the Employer that, in providing goods, services or both, as the case may be, for the duration of the contract, it will not infringe or make unauthorised use of the Intellectual Property rights of any third party and hereby indemnifies the Employer from any claims,

liability, loss, damages, costs, and expenses arising from the infringement or unauthorised use by the contractor of any third party's Intellectual Property rights.

- 1.3.5.6 In the event that the contract is cancelled, terminated, ended or is declared void, any and all of the Employer's Intellectual Property, and any and all information and data related thereto, shall be immediately handed over to the Employer by the contractor and no copies thereof shall be retained by the contractor unless the Employer expressly and in writing, after obtaining due internal authority, agrees otherwise.

Add the following Clause after Clause 1.3.6:

- 1.3.7 The parties agree that this contract shall also be subject to the Employer's Supply Chain Management Policy ('SCM Policy') that was applicable on the date the bid was advertised. Please refer to this document contained on the Langeberg Municipality's website.
- 1.3.8 Abuse of the supply chain management system is not permitted and may result in cancellation of the contract, restriction of the supplier, and/or the exercise by the Employer of any other rights and remedies available to it as described in the SCM Policy.

Clause 2:

Add the following Clause after Clause 2.5.1:

2.6 Procedures for the allocation of Works Projects

The Employer reserves the right to plan and effect individual **Works Projects and Emergency Works Projects** at its sole discretion.

The Employer will only order those quantities of work items which it actually requires for execution in a Works Project from time to time. The Employer reserves the right not to order any quantities at all depending on circumstances and subject to operational requirements.

The Works Projects shall be executed in areas within the Stellenbosch municipal area and outlined in clause C.1.6.1 in Part T1.2 Tender Data.

The Works Projects shall be identified subject to availability of funding.

The procedures for the allocation of Works Projects are described in detail at the end of this Part 1: Contract Data provided by the Employer.

Emergency Works Projects are defined by one in which an urgent and unexpected situation occurs where health and public safety or the conservation of public resources is at risk and a purchase of goods and/or services must be made in response thereto. An Emergency Works procedure may be initiated at the sole discretion of the Employer.

Clause 3.1

Delete clause

Clause 3.2.2

Add the following at the end of the clause:

If, in exercising any discretion, the result of such decision would be to utilise the contingency allowance, increase the contract value or granting of time for practical completion, the Employer's Agent must obtain approval from the Employer that such funding or time is available and granted by the Employer to be awarded prior to finalising such a decision.

Clause 3.2.3:

The Employer's Agent shall obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses of the General Conditions of Contract or Contract Data:

- a) Clause 3.3.1 Nomination of Employer's Agent's Representative
- b) Clause 3.3.4 Employer's Agent's authority to delegate
- c) Clause 5.8.1 Non-working times
- d) Clause 5.11.1 Suspension of the Works
- e) Clause 5.12.4 Acceleration instead of extension of time

- f) Clause 6.3.1 Ordering of any variation that causes the contract price to exceed the contract sum
- g) Clause 6.4.1 Approval of rates for new items
- h) Clause 6.10.10 Advance payment, for items not listed in the Advance Payment Schedule

Clause 5:

Add the following Clause after Clause 5.1.1.2:

5.1.2 Framework Contract Period

The Framework Contract Period end 30 June 2027.

Clause 5.3:

Delete Clauses 5.3.1 to 5.3.3 in their entirety and replace with the following:

- 5.3.1 Upon appointment to the Panel or Panels the Contractor shall submit the required documentation, for approval by the Framework Contract Manager, as set out below. If the documentation is not submitted with 14 days from the Commencement Date, or is found to be unacceptable, the Employer may terminate the Framework Contract in terms of Clause 9.2.

The documentation required is:

- a) Approved framework Health and Safety Plan (Refer to applicable clause in the Health and Safety Specification in Part C3.5 in the Scope of Work)
- b) Security (Refer to Clause 6.2)
- c) Evidence of Insurance (Refer to Clause 8.6)
- d) Occupational Health and Safety Agreement (Part C1.5 in Agreements and contract Data)
- e) Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer) (Refer to Clause 4.3)
- f) Protection of the Environment Declaration (Part C1.6 in Agreements and Contract Data)

- 5.3.2 The Contractor shall, save as may be otherwise provided in the Contract or be legally or physically impossible, commence executing the Works on the date specified in the Works Project contract; subject to the submission by the Contractor, and approval by the Employer's Agent, of any documentation required before commencement with Works execution, as set out in the Works Project contract.

The following documentation shall be submitted for **each Works Project** by contractors on a Panel as part of the Works Project submission:

- a) Approved site specific Health and Safety plan (Refer to Health and Safety Specification in Part C3.5 Management and any other specific requirements stated in the Works Project contract document)
- b) Initial Programme (Refer to Clause 5.6)
- c) Evidence of Insurance (Refer to Clause 8.6)
- d) Proof of Registration / Letter of Good Standing with the Bargaining Council for the Civil Engineering Industry (BCCEI)

The time to submit any documentation required before commencement with Works execution of **each Works Project** shall be within the number of days from the Commencement Date of the Works Project as specified in the Works Project contract. Such documentation may include:

- e) Method Statement (Refer to Environmental Management Specification in Part C3.5 Management)

Clause 5.4.2:

Access to and possession of the Site shall not be exclusive to the Contractor insofar as the provisions of Clause 4.8 apply, and where ongoing use by the general public is required.

Add the following Clause after Clause 5.4.3:

- 5.4.4 The Contractor shall bear all costs and charges for special and temporary rights of way required by him in connection with access to the Site.

Clause 5.6.2.3:

Insert the following after "...approvals,":

... permits,

Clause 5.8.1:

The non-working days are Saturdays and Sundays.

The special non-working days are:

- a) All gazetted public holidays.
- b) Year-end break(s) not exceeding 15 working days in duration.

Clause 5.12.1:

Add the following:

The Contractor may not claim a delay on another Works Project as causing delay on the particular Works Project contract in question.

Clause 5.12.2.2:

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

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

January	2 days
February	2 days
March	2 days
April	2 days
May	2 days
June	4 days
July	4 days
August	4 days
September	4 days
October	2 days
November	2 days
December	2 days

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

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

Clause 5.13.1:

The penalty for failing to complete the Works of each Works Project within the time referred to in Clause 1.1.1.14 is **R5 000 (five thousand rand)** per day.

Insert the following after “actual date of Practical Completion”:

... or, in the case of termination by the Employer in terms of Clause 9.2.1, the actual date of termination,

Add the following Clause after Clause 5.13.2

Clause 5.13.3 A Contractor that has been penalised in terms of Clause 5.13.1, may also be given written notice by the Employer that the Contractor shall have the next prospective Works Project award denied.

Clause 5.16.3:

The latent defects period is **10** years.

Clause 6.2.1:

The security to be provided by the Contractor shall be a blanket performance guarantee of **R600 000.00 (six hundred thousand rand)**. The performance guarantee shall contain the precise wording of the document included in Part C1.3 of the Contract Data: **Form of Performance Guarantee**, and it shall be issued by a financial institution approved by the Employer at the date when the guarantee is issued. The list of approved financial institutions current at the date of tender is attached to the **Form of Performance Guarantee**.

In the event of the guarantee being called up (in full or in part) the Contractor shall within 21 days of the issue of a first written demand by the Employer to the Guarantor, provide at his own cost a replacement performance guarantee for the full amount and no work will be allocated to the Contractor until the replacement performance guarantee has been provided.

Clause 6.2.2:

Delete Clause 6.2.2 in its entirety.

Clause 6.5.1.2.3:

The percentage allowance to cover overhead charges is **10%**

Clause 6.8.2:

Add the following to Clause 6.8.2:

The Contract Price shall be subject to contract price adjustment in accordance with Clause 6.8 of the General Conditions of Contract.

If special materials are specified in Part 2 of the Contract Data then the provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials.

Where applicable, in terms of the foregoing, the value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values for "Concrete works" and/or "Roads and earthworks":

The value of "x" is 0,10.

The values of the coefficients for "Water and Sewer Reticulation" are:

a = 0,15 b = 0,20 c = 0,55 d = 0,10

The base month is one month prior to the month in which the tender closed.

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

All scheduled rates will be fixed for each year of the contract period and will be adjusted annually by applying a "Contract Price Adjustment Factor" to each rate, calculated according to the formula and, generally, in accordance with the conditions set out in the Contract Price Adjustment Schedule and in this clause.

The base month is one month prior to the month in which the tender closed and the current month will be the closest month for which indices are available at the time of the recalculation of the rates.

"L" is the "Labour Index" and shall be the Consumer Price Index (CPI) for "All items (CPI Headline)", as published in the Statistical News Release, P0141: Table A – Consumer Price Index: Main Indices of Statistics South Africa

"P" is the "Plant Index" and shall be the Construction Materials Price Index for "Plant and Equipment" as published in the Statistical News Release P0151.1, Table 4 – Mining and construction plant and equipment price index of Statistics South Africa.

"M" is the "Materials Index" and shall be the Construction Materials Price Index for selected materials, Materials for "Civil Engineering material – roads, general (**excluding bitumen, uPVC, Steel and HDPE**)", as published in the Statistical News Release P0151.1, Table 6 – Civil engineering material price indices of Statistics South Africa

"F" is the "Fuel Index" and shall be the Producer Price Index (PPI) for "Coal and Petroleum Products - Diesel", as published in the Statistical News Release P0142.1: Table 1 –PPI for final manufactured goods of Statistics South Africa

For the purposes of calculating the adjustment rates, the applicable Contract Price Adjustment Factor shall be multiplied with each rate.

If special materials are specified in Part 2 of the Contract Data then the provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials.

Note: The Contract Price adjustment factor shall be calculated to four decimal places

Clause 6.8.3: Variation in the cost of special materials

Price adjustment for variations in the cost of special materials is provided for in the Special Materials Schedule at the end of this Part 1: Contract Data provided by the Employer.

Clause 4.2 of the Contract Price Adjustment Schedule

Delete the words "by the Contractor" that appear after "... entered in the Contract Data"

Clause 6.8.4:

Add the following to Clause 6.8.4:

Notwithstanding the above, in the event that a public holiday is proclaimed after 7 days before the closing date for an offer on a Works Project, no costs other than those that can be claimed under Clause 5.12.3 shall be added to the Contract Price.

Add the following after Clause 6.8.4:

- 6.8.5. Price adjustment for variations in the cost of plant and materials imported from outside of South Africa is provided for Cured-In-Place-Pipe liners. The information provided by the Contractor in Schedule 21 – Price Basis for Imported Resources will be used to calculate adjustments, which will be paid in pay Item PS-TB-10.4.

If price adjustment for variations in the cost of plant and materials imported from outside of South Africa is provided for in the contract data, such adjustment shall be based on the information contained on the schedule titled "Price Basis for Imported Resources" and as below. For the purposes of this clause the Rand value of imported Plant and Materials inserted on the schedule titled "Price Basis for Imported Resources" (column (F)) shall be the value in foreign currency (column (A)) converted to South African Rand (column (C)) by using the closing spot selling rate quoted by Employer's main banker, ABSA, on the Base Date (seven calendar days before tender closing date) rounded to the second decimal place (column(B)), to which shall be added any Customs Surcharge and Customs Duty applicable at that date (columns (D) and (E)).

6.8.5.1 Adjustment for variations in rates of exchange:

- (a) The value in foreign currency inserted in column (A) shall be subject to clause (h) below when recalculating the Rand value.
- (b) The rate of exchange inserted in column (B) shall be the closing spot selling rate quoted by **Employer's** main banker, ABSA, on the Base Date, rounded to the second decimal place, subject to sub-paragraph (c) below.
- (c) If the rate of exchange inserted by the Tenderer differs from the ABSA rate referred to above, then the ABSA rate shall apply and the Rand value in columns (C) and (F) shall be recalculated accordingly, without altering the price in the Schedules of Quantities for the relevant items.
- (d) If a tender from a supplier or sub-contractor provides for variations in rates of exchange, the Contractor may **only** claim for variations in rates of exchange if he binds the supplier or sub-contractor to the same provision to take out forward cover as described in sub-paragraph (e) below.
- (e) The Contractor (or supplier or sub-contractor) shall within five working days from the date of placing a firm order on an overseas supplier, cover or recover forward by way of a contract with a bank which is an authorised foreign exchange dealer, the foreign exchange component of the cost of any imported Plant and Materials inserted by the Tenderer on the schedule titled "**Price Basis for Imported Resources**".

- (f) When the Contractor (or supplier or sub-contractor) so obtains forward cover, the Contractor shall immediately notify the Employer of the rate obtained and furnish the Employer with a copy of the foreign exchange contract note.
- (g) Based on the evidence provided in sub-paragraph (f) above, the value in Rand inserted in column (C) on the schedule titled **"Price Basis for Imported Resources"** shall be recalculated using the forward cover rate obtained, and any increase or decrease in the Rand value defined in this clause shall be adjusted accordingly, subject to sub-paragraph (h) below. Failure to provide such evidence shall result in no such recalculation shall be considered by the Employer.
- (h) The adjustments shall be calculated upon the value in foreign currency in the Contractor's (or supplier's or sub-contractor's) **forward cover contract**, provided that, should this value exceed the value in foreign currency inserted in column (A) of the schedule titled **"Price Basis for Imported Resources"**, then the value in column (A) shall be used.

6.8.5.2 Adjustment for variations in customs surcharge and customs duty

- (a) Any increase or decrease in the Rand value between the amounts of Customs Surcharge and Customs Duty inserted on the schedule titled **"Price Basis for Imported Resources"** and those amounts actually paid to the Customs and Excise Authorities, which are due to changes in the percentage rates applicable or to the foreign exchange rate used by the authorities, shall be adjusted accordingly.
- (b) The Tenderer shall state the Customs Duty Tariff Reference applicable to each item and the Contractor shall advise the Employer's Agent of any changes which occur.

6.8.5.3 Adjustment for variation in labour and material Costs

If the prices for imported Plant and Materials are not fixed, the Contractor shall in his Tender specify the formula for calculating Contract Price Adjustments normally used in the country of manufacture and the indices and relative proportions of labour and material on which his Tender prices are based. Evidence of the indices applicable shall be provided with each claim. The indices applicable 42 days before contractual dispatch date from the factory will be used for the purposes of Contract Price Adjustment.

Failure to specify a formula in the Tender shall mean that the prices are fixed or shall be deemed to be fixed.

Clause 6.10.1.5:

Delete Clause 6.10.1.5 in its entirety and replace with the following:

6.10.1.5 The value of Plant and materials:

- 6.10.1.5.1 up to a percentage limit of **80%** for the Plant and materials referred to in Clause 6.9.1.1 brought on to the Site but not yet built into the Permanent Works;

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

- 6.10.1.5.2 which have been manufactured and are stored at places other than the Site, in respect of which the Employer has indicated, on the Advance Payment Schedule, that advance payment will be permitted;

- 6.10.1.5.3 for which a deposit with order is required from the Contractor by a manufacturer/supplier, only in respect of which the Employer has indicated, on the Advance Payment Schedule, that advance payment will be permitted;

The terms and conditions for advance payment are set out in Clause 6.10.10 and in the Advance Payment Schedule at the end of this Part 1: Contract Data provided by the Employer.

Clause 6.10.1.7:

Add the following after the words "Clause 5.13":

or any other fines or penalties that become due under the Contract.

Clause 6.10.3:

Add the following to Clause 6.10.3:

Notwithstanding the provision of a performance guarantee in terms of Clause 6.2.1, interim payments to the Contractor shall be subject to a retention by the Employer of an amount of **5%** of the said amounts due to the Contractor, with no limit per Works Project. A guarantee in lieu of retention is not permitted.

Clause 6.10.4:

Add the following to the last sentence of Clause 6.10.4:

..., dated as at the date which the Contractor's statement reaches the approval of the Employer's Agent under the provisions of 6.10.4.

Add the following to Clause 6.10.4:

Notwithstanding the above, the Employer's Agent shall be empowered to withhold the delivery of the payment certificate until the Contractor has complied with his obligations to report in terms of Clause 4.10.2 and as described in the Scope of Work.

The statement to be submitted by the Contractor in terms of Clause 6.10.1 and 6.10.4 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Employer's Agent, in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit two (2) A4 size paper copies of the statement.

For the purposes of the Employer's Agent's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Employer's Agent for the purposes of accurately reflecting the actual quantities and amounts which the Employer's Agent deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Employer's Agent within three (3) normal workings days from the date on which the Employer's Agent communicated to the Contractor the adjustments required. The Contractor shall submit to the Employer's Agent five (5) sets of A4 size paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Employer's Agent the requisite copies of the adjusted statement for the purposes of the Employer's Agent's payment certificate will be added to the times allowed to the Employer's Agent in terms of Sub-clause 6.10.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

The Contractor may submit a fully motivated application regarding more frequent payment to the Employer's Agent to be submitted to the Employer for consideration. Requests for more frequent payments will be considered at the sole discretion of the Employer and is not a right in terms of this contract.

Clause 6.10.10:

Add the following Clause after Clause 6.10.9:

6.10.10 Advance payment (Not applicable)

Subject to Clauses 6.10.1.5.2 and 6.10.1.5.3, and the Advance Payment Schedule, the Employer shall make an advance payment for Plant and materials stored at places other than the Site, or in respect of which a deposit with order is required, only once the Contractor has submitted an advance payment guarantee in accordance with this Clause.

Unless and until the Employer receives this guarantee, the following paragraphs shall not apply.

The Employer's Agent shall issue an Interim Payment Certificate for, or including, advance payment after receiving a statement under Clause 6.10.1 and after the Employer has received a guarantee in an amount equal to the advance payment requested. This guarantee shall be issued by a financial institution approved by the Employer, as listed in the Annexure in Part C1.3 of the Contract Data, and shall be in the form of and shall contain the precise wording of the document included in Part C1.4: **Form of Advance Payment Guarantee** and shall come into force, be administered and expire in terms thereof.

The Employer shall return the guarantee to the Contractor within 14 days after the expiry date.

The provision of the Advanced Payment Guarantee shall be at the Contractor's cost.

The term "deposit" or "deposit with order" used in the context of this Clause and elsewhere by reference to this Clause, means a sum payable by the Contractor to a manufacturer/supplier prior to the manufacture of an item of Plant or material, required at the time of placing an order, the balance of the value of the item being payable later.

Clause 8.6.1:

The insurances to be effected and maintained by the Contractor shall be in the form of a blanket/umbrella policy for this term tender Framework Contract. This policy shall be endorsed as and when required to reflect each Works Project that may be allocated to the Contractor.

Clause 8.6.1.1.1:

The Contract Price shall, for insurance purposes, include for individual Contract Sums of up to **R20 000 000** for each Works Project.

Clause 8.6.1.1.2:

The value of Plant and materials supplied by the Employer to be included in the insurance sum is **R 0.00 (Nil)**.

Clause 8.6.1.1.3:

The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is **R0.00 (Nil)**.

Clause 8.6.1.3:

The limit of indemnity for liability insurance is R20 000 000.00 for any single claim – the number of claims to be unlimited during the construction and defects liability periods.

Clause 8.6.1.5:

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

- a) Insurance of Construction Equipment (including tools, offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.
- b) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
- c) Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability Indemnity.
- d) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance.

Clause 8.6.5:

Delete the following from Clause 8.6.5:

"and the terms thereof shall be subject to the approval of the Employer's Agent, which approval shall not be unreasonably withheld."

Clause 8.6.6:

Replace clause 8.6.6 with the following:

The evidence that the insurances have been effected in terms of Clause 8.6.1, shall be in the form of an insurance broker's warranty worded precisely as given in Part C1.7 Insurance Broker's Warranty.

In addition, an insurance broker's warranty will be required for every Works Project as and when the contractor submits an offer for a Works Project contract. This warranty shall, *inter alia*, confirm that the applicable blanket/umbrella policy for the term tender contract has been endorsed to reflect the Works Project contract and that all premiums have been paid.

Clause 8.6.7:

Add the following to the end of this Clause:

; and/or the Employer shall be entitled to exclude the Contractor from participating in any future Works Project processes until such time as satisfactory evidence has been provided.

Clause 9.1:

In Clause 9.1.6 replace "and 9.1.3" with:

, 9.1.3 and 9.1.7

Add the following Clause after Clause 9.1.6:

9.1.7 Death of Sole Proprietor/Member

Upon the death of the Contractor who was a Sole Proprietor, or a sole member of a Close Corporation, the Contract will terminate forthwith. The Employer shall pay to the Contractor's estate any money which it considers due under the Contract in terms of Clause 9.1.5, in full and final settlement thereof.

9.1.8 Material Irregularity during procurement process

The Employer may terminate the contract if a material irregularity vitiates the procurement process leading to the conclusion of the contract, rendering the procurement process and the conclusion of the resulting contract unfair, inequitable, non-transparent, uncompetitive or not cost-effective, provided the Employer follows the processes as described in its SCM Policy.

9.1.9 Reputational risk or harm to the Employer

The Employer, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate the contract if the implementation of the contract may result in reputational risk or harm to the City as a result of (*inter alia*):

- 9.1.9.1 reports of poor governance and/or unethical behaviour;
- 9.1.9.2 association with known family of notorious individuals;
- 9.1.9.3 poor performance issues, known to the Employer;
- 9.1.9.4 negative social media reports; or
- 9.1.9.5 adverse assurance (e.g. due diligence) report outcomes.

Clause 9.2.1.3:

Add the following paragraph after the last Paragraph in Clause 9.2.1.3:

Should the Contract be terminated by the Employer, the Contractor will be given written notice by the Employer that the Contractor shall be removed from all panels.

Delete "or" at the end of Clause 9.2.1.3.6 and add the following Clause after Clause 9.2.1.3.7:

9.2.1.3.8 Has failed to provide the required insurances within the prescribed time,

Add the following Clause after Clause 9.2.3:

9.2.4 Employer's Elections in case of Insolvency

In addition to anything else contained in this contract, the Employer may make either of the following elections to ensure its rights are protected and any negative impact on service delivery is mitigated:

- 9.2.4.1 accept a contractor's proposal (via the trustee / liquidator) to render delivery utilising the appropriate contractual mechanisms; or

9.2.4.2 terminate the contract, as the liquidator proposed contractor is deemed unacceptable to the employer, at any time by giving written notice to the contractor (via the trustee / liquidator).

Clause 10.5.3:

The number of ad-hoc Adjudication Board Members to be appointed is 1(one).

ADDITIONAL CONDITIONS OF CONTRACT

Add the following Clause after Clause 10:

Clause 11 Details to be confidential

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

Z.1 Data Protection

- Z1.1 The Contractor acknowledges that during the course of the performance of the services, it and its employees, representatives and/or sub-contractors may gain access to and become acquainted with the Personal Information and/or Special Personal Information and children's information (collectively, "Personal Information") (as these terms are defined or explained in the Protection of Personal Information Act 4 of 2013, as amended from time to time, referred to as "POPIA"), of the Employer, its employees, clients, representatives, sub-contractors and/or suppliers. The Contractor will, and will procure that its employees, representatives and sub-contractors, treat such Personal Information as confidential and respect the privacy of the Employer, its employees, clients, representatives, sub- contractors and/or suppliers.
- Z1.2 The Contractor further acknowledges that during the course of the performance of the services, it and its employees, representatives and/or sub-contractors may also be required to collect, use or process the Personal Information of the Employer and/or its employees, clients, representatives, sub- contractors and/or suppliers and, when doing so, will comply, and will procure that they comply, with (i) the conditions of lawful processing as set out in terms of POPIA and other applicable laws and regulations; (ii) the Privacy Notice and (iii) the Employer's data protection procedures;
- Z1.3 The Employer, its employees, representatives and sub-contractors may, from time to time, Process the Contractor's and/or its employees', representatives' and/or sub-contractors' Personal Information, for purposes of, and/or relating to, the tender, this agreement, for research purposes, and/or as otherwise may be envisaged in the Employer's Privacy Notice and/or in relation to the Employer's Supply Chain Management Policy or as may be otherwise permitted by law. This may include the cross-border transfer of Personal Information and/or Special Personal Information (including children's information) from time to time. The Contractor acknowledges that it has read and understood this, the Employer's Privacy Notice and the Employer's Supply Chain Management Policy and hereby consents to the Employer, its employees and/or representatives and/or sub-contractors Processing its Personal Information for those purposes and/or as otherwise contemplated herein.
- Z1.4 The Contractor agrees and undertakes to procure that its employees and/or representatives and/or sub-contractors are made aware that the Employer may process their Personal Information from time to time as envisaged herein.
- Z1.5 The Contractor hereby warrants in favour of, and represents to, the Employer, its employees, representatives and sub-contractors, that the Contractor and its employees, representatives and sub-contractors are permitted to Process the Personal Information, which they have and/or will Process in, and in relation to, this tender and agreement, including but not limited to the disclosure of the Personal Information herein and irrevocably undertake to comply with all applicable laws in this regard and will procure that their employees, representatives and sub-contractors also so comply.
- Z1.6 The Contractor hereby indemnifies and holds each of the Employer, its employees, representatives and sub-contractors harmless against all claims, losses, damages and costs relating to the Processing of Personal Information by the Contractor, its employees, representatives and/or sub- contractors.
- Z1.7 In order to comply with section 19 read with section 21 of POPIA to the extent that the Contractor processes Personal Information for which it is the Operator and the Employer is the Responsible Party under POPIA, the parties agree and the Contractor irrevocably undertakes that it shall:

- Z.1.7.1 only Process Personal Information on behalf of the Employer if (i) the processing of such information is within the knowledge or authorisation of the Employer, (ii) it treats the Personal Information which comes to its knowledge as confidential and does not disclose it, and (iii) the Processing is done in a lawful and reasonable manner, and only to the extent required to execute the services, or to provide the goods, or to perform its obligations pursuant to the agreement;
- Z.1.7.2 put in place, and at all times maintain, appropriate, reasonable, technical and organisational measures to ensure the protection and confidentiality of the Personal Information that it, or its employees, its representatives, its sub-contractors and other authorised individuals come into contact with pursuant to the agreement;
- Z.1.7.3 do all such things as are necessary to prevent the: (i) loss of, damage to, and/or unauthorised destruction of Personal Information; and (ii) unlawful access to or processing of personal information;
- Z.1.7.4 notify the Employer immediately where there are reasonable grounds to believe that the Personal Information in its possession has been accessed or acquired by any unauthorised person;
- Z.1.7.5 at all times comply with the provisions of POPIA, its regulations and any applicable codes of conduct, as well as the Employer's Privacy Notice;
- Z.1.7.6 give the Employer reasonable access to its premises, systems and processes to enable the Employer to inspect same and conduct a data protection compliance audit thereof from time to time on receipt of request from the Employer and undertakes to give its full co-operation in this regard;
- Z.1.7.7 upgrade, adapt and/or change its systems and processes upon request from the Employer from time to time, to meet the security standards reasonably required by the Employer as the Responsible Party in terms of POPIA.
- Z1.8 The Contractor hereby indemnifies and holds the Employer harmless against all claims, losses, damages and costs of whatsoever nature suffered by the Employer arising from or in relation to the Contractor's (and/or its employees', representatives' and sub-contractors') non-compliance with applicable data protection laws and/or other legislation.

PROCEDURES FOR THE ALLOCATION OF WORKS PROJECTS

The procedures for the allocation of Works Projects, given below, are to be read in conjunction with clause F.1.6.1 in Part T1.2 Tender Data and Clause 2.6 in the Contract Data. These procedures include the development of Works Project contract documents, applying the tendered rates in order to arrive at financial offers, calculating works project evaluation points, ranking the panel of contractors, and allocating the Works Project to the highest ranked contractor.

The procedures are summarised under the stages below, wherein the Employer (acting through his agent) shall

Stage 1: Employer prepares Works Project contract document, prices bills of quantities using each contractor's rates and prepares a works project evaluation ranking for all contractors

- a) select a Work Area for the execution of the Works Project;
- b) prepare a Works Project contract document, including Bills of Quantities and Scope Work therein;
- c) compute financial offers for all contractors, using their respective framework contract rates; and
- d) award works project evaluation points for each contractor, based on the financial offer and B-BBEE preference, and prepare a works project evaluation ranking of all contractors;
If the highest ranked contractor has incurred penalties and the contractor has been given written notice by the Employer that the Contractor shall have the next Works Project awarded to him denied, that contractor will be removed from the evaluation for that Works Project;

Stage 2: Contractors collect copy of Works Project contract document and works project evaluation ranking, attend compulsory Works Project meeting and submit acceptance/refusal notices

- e) make available to the contractors a copy of the Works Project contract document with the Bills of Quantities priced by the Employer (as in b) and c) above), together with the works project evaluation ranking of all contractors (as in d) above);
- f) simultaneously, invite the contractors to attend a compulsory Works Project meeting;
- g) conduct the Works Project meeting, including discussing any issues the contractors may have (this may result in changes being made to the Works Project contract document and its being re-issued after steps c) to e) have been repeated); and
- h) receive acceptance/refusal notices from contractors timeously after the meeting;

Stage 3: Highest ranked contractor submits completed Works Project contract document and Employer allocates Works Project

- i) request the highest ranked contractor, who attended the Works Project meeting and accepted the work opportunity, to complete the Returnable Schedules, Form of Offer, Works Project Acceptance/Refusal Notice, etc. in the Works Project contract document and submit the completed document to the Employer; and
- j) test submission for completeness and allocate the Works Project to the contractor or, if his offer is non-responsive/invalid, repeat the processes in i) and j) with the contractor with the next highest evaluation points.

Further details of the procedures under the above stages are given below.

Stage 1

As and when the Employer requires work to be executed in a Works Project under the framework contract, the Employer shall specify, *inter alia*, the nature, location(s), extent, scope of work, proposed programme and contract period for the work required, in a **Works Project contract document** comprising, as relevant, Work Allocation Procedures, Returnable Schedules, Agreements and Contract Data, Bills of Quantities and Scope of Work.

In the Bills of Quantities the Employer shall assign quantities to the work items relating to the specific Scope of Work in the Works Project. The assigned quantities shall be multiplied by the framework contract rates to constitute amounts that will be totalled to provide a **financial offer** for each contractor for this specific Works Project.

The Employer shall evaluate the financial offers so constituted, together with the contractor's **B-BBEE status** as at the time of the framework tender closing date, in accordance with clause P.3.4 in Part A1.2 Work Allocation Procedures in the Works Project contract document, and prepare a **works project evaluation ranking** for the Works Project.

If the highest ranked contractor has had a previous Works Contract terminated for poor performance or because of penalties, and the Contractor has been given written notice by the Employer that the Contractor shall have the next Works Project awarded to him denied, that contractor will be removed from the evaluation for that Works Project;

Stage 2

The Employer shall invite the contractors to attend a compulsory **Works Project meeting** at a time and venue disclosed in writing by the Employer.

The Employer shall issue the invitation **at least three (3)** days prior to the meeting date, and simultaneously make available to the contractors their individually priced Works Project contract documents, together with the works project evaluation ranking of all the contractors for the Works Project.

The Employer shall conduct the compulsory Works Project meeting on the date specified. The purpose of this meeting is to inform the contractors of the Scope of Work required in the Works Project. The meeting shall furthermore serve to answer any queries the contractors may have in respect of the required work, billed items and quantities, etc. (this may result in changes being made to the Works Project contract document and its being re-issued as in g) above). A contractor who fails to attend the compulsory Works Project meeting will be **excluded** from further participation in the Works Project allocation process.

Included in the Works Project contract document is a Works Project **Acceptance/Refusal Notice** (Form C1.9) requesting the contractor to state in writing whether he accepts/refuses the opportunity afforded to participate further in the work allocation procedure (i.e. that he is willing/not willing to undertake the work specified in the Scope of Work and Bills of Quantities and has/has not the necessary resources, including a site specific construction manager, available to complete the work within the required Works Project contract period should he be allocated the work).

Contractors will be required to complete and return the Works Project Acceptance/Refusal Notice, either by fax or email, to the Employer prior to the closing date for receipt of Works Project Acceptance/Refusal Notices (non-submission will be regarded as a refusal), including, for those who accept, declaring whether their declarations in respect of sub-contractors made in the Preferencing Schedule in the Framework Contract document stand for the Works Project, or not - refer to Form C1.9 in this regard. The Employer will finalise the ranking of the contractors who accept, after taking their declarations into account.

Stage 3

Upon request of the Employer, the Works Project contract document shall be completed, signed and returned by the highest ranked contractor who has accepted to the Employer's Agent's offices no later than the date stated in such request.

The Employer will specify the proposed Works Project construction time period (time from the date specified for commencement with Works execution to Due Completion Date) for completing the specified Works in the Scope of Work in the Works Project contract document. The contractor shall submit a realistic **preliminary construction programme** reflecting his proposed sequence and tempo of execution of the Works Project contract for completing the Works within the prescribed construction time period, and shall append the preliminary (initial) programme to the applicable schedule in Part A2.2 Returnable Schedules in the Works Project contract document.

The submission of a fully completed and signed Works Project contract document is mandatory for the contractor who has been requested by the Employer to submit his offer, and the contractor may be requested by the Employer to complete and/or sign his submission, if necessary, should he have not already done so. A submission will be **rejected** as being non-responsive/invalid if the document is not fully completed and/or signed after the contractor has been requested by the Employer to complete and/or sign his submission.

The returned Works Project contract document will be **tested for completeness** in accordance with these procedures. The contractor whose returned Works Project contract document is fully completed and signed will be appointed as Contractor to execute the Works for the specific Works Project in terms of the Contract.

A contractor whose offer is non-responsive/invalid, or who failed to return the completed, signed Works Project contract document (the offer) by the date stated in the Employer's request, will be **excluded** from further participation in the Works Project allocation process, and the next highest ranked contractor who has accepted will be requested to submit his offer (in such a circumstance the construction time period may have to be amended by the Employer and agreed to by the contractor).

Acceptance of the successful contractor's offer takes place on the date the contractor (now Contractor in terms of the Contract) receives the Langeberg Municipality's official **purchase order**, such date being the Commencement Date of the Works Project contract.

The value of a Works Project can be in the small to large range and even over R10 000 000 but not more than R20 000 000 (including contingencies and VAT, but excluding contract price adjustment, if applicable).

Working days for these procedures are Mondays to Fridays.

PROCEDURES FOR THE ALLOCATION OF EMERGENCY WORKS PROJECTS

The procedures for the allocation of Emergency Works Projects, given below, are to be read in conjunction with clause F.1.6.1 in Part T1.2 Tender Data and Clause 2.6 in the Contract Data. These procedures firstly include the receipt of pipe burst and/or other infrastructure failure which requires urgent attention, preceded by a call out notification from a Langeberg Municipality Representative, followed by the development of a Works Project contract document, applying the tendered rates, and allocating the Works Project to the contractor, on a "winner-takes-all" basis as described in clause F1.6.1, as follows:

In terms of the foregoing, "the contractor" in the procedures below is the contractor under consideration (starting with "the winner") for the allocation of the Works Project.

The procedures are summarised under the stages below, wherein the Employer (acting through his agent) shall:

Stage 1

The Langeberg Municipality Representative on duty will contact the contractor for the region via telephone or cell phone notifying them of impending works. The contractor will provide 2 (two) contact numbers on which he can be telephonically contacted at all times. The Municipal Representative on duty will try both numbers and if unsuccessful, will communicate with the backup contractor for the region, as per procedure set out in C.1.6.1 of the Tender Data.

The time for the contractor to be on site to attend to the Emergency situation is a maximum of 2 hours between 07h30 and 16H00 from Mondays to Fridays and a maximum of 4 hours on weekends, after hours and public holidays, after receiving an official call-out notification from the Municipal Representative on duty.

The shutting off of the water supply, will be the responsibility of the Langeberg Municipality staff.

Continuous unsuccessful contact, failure to response or delaying moving onto site, will lead to sanction in terms in Management Policy.

Stage 2

As soon as possible after the notification, the Municipal Representative will send a follow up email to the responding contractor confirming the time of call(s), time on site, general details of the site, general details of the emergency and copied to the superintendent.

Should a contractor not respond to an Emergency Project, is not contactable or delays moving onto site, an e- mail will be sent confirming these aspects including the approximate time an attempt was made to contact him.

The contractor is to sign the Acceptance Form on the first working day, following the notification. Scanned e- mail / faxed copy of the Acceptance Form are initially acceptable.

Should the contractor refuse the works, an email must be sent to the Municipal Representative confirming his refusal. The backup contractor(s) will then be contacted as per the procedure set out in C.1.6.1 of the Tender Data.

Stage 3

The Contractor must move onto the site within the stipulated time of notification, with an adequate team and all the necessary equipment to make the area safe and prevent further damage.

The Contractor will be required to make safe the area, cordon off the site, determine the extent of the damage.

The Langeberg Municipality representative will be required to obtain the emergency wayleaves (especially Sewer and Electricity services) and supervise the emergency repair work undertaken by the contractor. The contractor shall abide by any conditions imposed by such wayleaves, permissions or permits.

The contractor must take all necessary precautions not to damage any service, failing which he will held financially liable.

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

Stage 4

Before any repair work is undertaken, the contractor will report to the Langeberg Municipality Representative the extent of the problem and endeavour to complete the works. The Contractor will be required to complete and submit the Work Commencement Form.

The Contractor will also be required complete and submit a Daily Activity Sheet (DAS) and a Measurement Sheet (MS) on a daily basis to the Council Representative. The DAS and MS forms are to be signed each day and kept as records for filling and motivation for the amount billed. The repair of the water pipes is to be done as per particular specification TA.

The contractor is to sign the Acceptance Form on the first working day, following the notification. Scanned e- mail copy of the Acceptance Form are initially acceptable.

Stage 5

The Final Bill of Quantities (BOQ) and Invoice for the works completed by the Contractor MUST be submitted within 7 days to the Langeberg Municipality Representative.

The Supply Chain Management buyer will provide a Purchase Order with the completed works submitted and verified by the Langeberg Municipality Representative.

Each Works Project shall be in the **value range** of up to R20 000 000 (including contingencies and VAT, but excluding contract price adjustment, if applicable).

SPECIAL MATERIALS SCHEDULE		
Each material dealt with as a special material in terms of Clause 4.1 of the Contract Price Adjustment Schedule of the General Conditions of Contract is stated in the list below. The provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials. The base prices for the special materials (current at the time of tender) shall be as stated in the schedule below, or where required, shall be furnished by the tenderer/contractor. Only those materials listed by the Employer below shall be considered as special materials.		
Special Material	Unit	Base Price
Bitumen	m ³	As per Rubis
Steel	ton	As per StatsSA
uPVC	ton	As per Sasol
HDPE	ton	As Per Sasol
Conditions: 1) When called upon to do so, the contractor shall substantiate the prices to be used to determine the adjustment in respect of the special materials listed above with acceptable documentary evidence. 2) In the case of special materials, the Employer has provided, in the schedule above, a base rate for special materials upon which the tendered rates will be deemed to be based, and which will be used for determining the adjustment in the price of such special materials. 3) Where an adjustment for the variation in the price of special materials is claimed, the claim must be substantiated by a declaration from the manufacturer, confirming the source of special materials used in such special materials products at the time in question. 4) Where the source of special materials is located in the Western Cape Province, or where special materials sourced from abroad is landed at a port in the Western Cape, the cost of transporting such special materials within the boundaries of the Western Cape shall be included in the rate for special materials products. Extra-over rates to cover the cost of transporting special materials from beyond the borders of the Western Cape have been measured separately in the Bill of Quantities. 5) Where imported special materials used in the specified products is landed at a port beyond the borders of the Western Cape, the importers must clearly state whether or not their price is inclusive of transport to the Western Cape, which will determine whether extra-over transport costs are applicable, or not. The price of the imported special materials itself must be expressed as a landed price in ZAR.		

ADVANCE PAYMENT SCHEDULE (Not Applicable)	
This Advance Payment Schedule is to be read in conjunction with Clauses 6.10.1.5.2, 6.10.1.5.3 and 6.10.10 in the Contract Specific Data. The purpose of this schedule is to itemise specific Plant and materials not yet brought on to the Site for building into the Permanent Works and for which the Employer is prepared to make advance payments to the Contractor, subject to the conditions below. The items of Plant and materials which have been identified by the Employer as being suitable for advance payment in terms of the Contract are listed in the table below. Should an item or items be added to the list at tender stage by a tenderer, such item(s) will not be binding on the Employer.	
Plant and materials which have been manufactured and are stored at places other than the Site:	Plant and materials yet to be manufactured and for which a deposit with order is required from the Contractor by a manufacturer/supplier, and which may be stored at places other than the Site after manufacture:
Conditions: 1) The Contractor can only rely on advance payment being permitted by the Employer in respect of the Plant and materials listed in the table above. The Employer may, however, permit advance payment for other Plant and materials in exceptional circumstances and at its sole discretion, during the course of the Contract, and upon reasonable request from the Contractor. 2) Advance payment for the purposes of deposits will only be provided up to a limit of 20% of the value of any one item being claimed. 3) The Contractor shall provide the Employer with documentary evidence of the terms and conditions for which a deposit with order is required by a manufacturer/supplier, together with the advance payment guarantee. 4) The Contractor will also be permitted to obtain advance payment for the balance of the value of the Plant and materials in respect of which he has paid a deposit, for an item which after manufacture is stored at a place other than the Site. The Contractor shall, in respect of such payment, provide an advance payment guarantee, either for such balance or, if the advance payment guarantee in respect of the deposit is to be returned by the Employer upon request, for the whole value of the item.	

C1.2 Contract Data (provided by the Contractor)

Clause 1.1.1.9:

The name of the Contractor is

Clause 1.2.1.2:

The address of the Contractor is

Physical : Address		Postal : Address	
			
			
			
Telephone :		Fax:	
email :			

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS.

C1.3 Form of Performance Guarantee

PERFORMANCE GUARANTEE

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

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

"Physical address:

"Employer" means: The Langeberg Municipality

"Contractor" means: The Contractor named in an individual Works Project Contract.

"Employer's Agent" means: The Employer's Agent named in an individual Works Project Contract.

"Works" means: Works Projects which may be allocated, individually or as a whole as the context provides, under Framework Contract No. T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS.....

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

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties, and includes the Works Project Agreement.

"Guaranteed Sum" means: The maximum aggregate amount of R600 000.00

Amount in words: Six hundred thousand rand

"Expiry Date" means: The date of issue by the of the last Certificate of Completion of the Works for the Works Projects on the Framework Contract.

CONTRACT DETAILS

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

PERFORMANCE GUARANTEE

- 1. The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 2. The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to and including the Expiry Date or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the last Certificate of Completion of the Works for the Works Projects has been issued.
- 3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Performance Guarantee is restricted to the payment of money.

4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
 - 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
 - 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and
 - 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
8. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
9. The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
10. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
11. This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
12. This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

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

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

ANNEXURE

LIST OF APPROVED FINANCIAL INSTITUTIONS

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

National Banks:

ABSA Bank Ltd.
FirstRand Bank Ltd.
Investec Bank Ltd.
Nedbank Ltd.
Standard Bank of SA Ltd.

International Banks (with branches in SA):

Barclays Bank plc.
Citibank n.a.
Credit Agricole Corporate and Investment Bank
HSBC Bank plc.
JP Morgan Chase Bank
Societe Generale
Standard Chartered Bank

Insurance companies:

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

LANGEBERG MUNICIPALITY
INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.4 Form of Advance Payment Guarantee (Not Applicable)

ADVANCE PAYMENT 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: The Langeberg Municipality

"Contractor" means:

"Employer's Agent" means:

"Works" means: Works Project No....., to be executed under Framework Contract No. T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

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

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties, and includes the Works Project Agreement.

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

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

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

Amount in words:

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

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates and Final Payment Certificate for each Works Project.

ADVANCE PAYMENT GUARANTEE

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

3. The Guarantor hereby acknowledges that:
 - 3.1 any reference in this Advance Payment Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
 - 3.2 its obligation under this Advance Payment Guarantee is restricted to the payment of money.
4. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
 - 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;
 - 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) calendar days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
 - 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Advance Payment Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Advance Payment Guarantee, such demand stating that:
 - 5.1 the Contract has been terminated due to the Contractor's default and that this Advance Payment Guarantee is called up in terms of 5; or
 - 5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Advance Payment Guarantee is called up in terms of 5; and
 - 5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
6. It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
7. Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
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 Advance Payment Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
9. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
10. This Advance Payment Guarantee is neither negotiable nor transferable and shall expire in terms of 2, whereafter no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
11. This Advance Payment Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.

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

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

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Schedule of Plant and materials (Not to be used)

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

Employer Langeberg Municipality

Contractor

Works Works Project No....., to be executed under Framework Contract No. 36/2024
CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF
THREE (3) YEARS

Payment Certificate No.

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

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

Signed at on theday of.....20.....

.....
for the Contractor

.....
As witness

.....
Approved by Employer's Agent
Contract

LANEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.5 Occupational Health and Safety Agreement

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

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

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

I,, representing

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

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

COID ACT Registration Number:

OR Compensation Insurer: Policy No.:

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

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

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

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

Signed aton the.....day of.....20....

Witness

Mandatory

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

Witness

for and on behalf of
Laneberg Municipality

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.6 Protection of the Environment Declaration

PROTECTION OF THE ENVIRONMENT DECLARATION

The Contractor will not be given right of access to the Site until this form has been signed

CONTRACT NO.: T36/2024

CONTRACT TITLE: T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

I/ we ,.....{Contractor} record as follows:

1. I/ we, the undersigned, do hereby declare that I/ we am/ are aware of the increasing requirement by society that construction activities shall be carried out with due regard to their impact on the environment.
2. In view of this requirement of society and a corresponding requirement by the Employer with regard to this Contract, I/ we will, in addition to complying with the letter of the terms of the Contract dealing with protection of the environment, also take into consideration the spirit of such requirements and will, in selecting appropriate employees, plant, materials and methods of construction, in-so-far as I/ we have the choice, include in the analysis not only the technical and economic (both financial and with regard to time) aspects but also the impact on the environment of the options. In this regard, I/ we recognise and accept the need to abide by the "precautionary principle" which aims to ensure the protection of the environment by the adoption of the most environmentally sensitive construction approach in the face of uncertainty with regard to the environmental implications of construction.
3. I/ we declare that I/ we have read and understood the contents of the Environmental Management Programme (which is comprised of the Environmental Management Specification and its Annexures) for this Contract, and that I/ we understand my/our responsibilities in terms of enforcing and implementing the Environmental Management Programme. I/ we also declare that I/ we have made appropriate provision in my/ our pricing of the Schedules of Rates items for the Environmental Management Programme.
4. I/ we acknowledge and accept the right of the Employer to deduct, should he so wish, from any amounts due to me/ us, such amounts (hereinafter referred to as fines) as the Employer's Agent shall certify as being warranted in view of my/ our failure to comply with the terms of the Contract dealing with protection of the environment, subject to the following:
 - 4.1 The Employer's Agent, in determining the amount of such fine, shall take into account, *inter alia*, the nature of the offence, the seriousness of its impact on the environment, the degree of prior compliance/non-compliance, the extent of the Contractor's overall compliance with environmental protection requirements and, in particular, the extent to which he considers it necessary to impose a sanction in order to eliminate/reduce future occurrences
 - 4.2 The Employer's Agent shall, with respect to any fine imposed, provide me/ us with a written statement giving details of the offence, the facts on which the Employer's Agent has based his assessment and the terms of the Contract (by reference to the specific clause) which has been contravened.

Signed
CONTRACTOR

Date.....

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.7 Insurance Broker's Warranty

Pro Forma



Letterhead of Contractor's Insurance Broker

Date _____

LANGEBERG MUNICIPALITY
Municipal Manager
28 Main Road
Ashton
6715

Dear Sir

CONTRACT NO.: T36/2024

CONTRACT TITLE: CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

NAME OF CONTRACTOR: _____

I, the undersigned, do hereby confirm and warrant that all the insurances required in terms of the abovementioned term tender contract have been issued and, in the case of blanket/umbrella policies, will be endorsed to reflect the interests of the LANGE BERG MUNICIPALITY with regard to each Works Project contract, and that all the insurances and endorsements, etc., are all in accordance with the requirements of the contract.

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

Yours faithfully

Signed: _____

For: _____

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS,
(RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.8 Contract of Temporary Employment as Community Liaison Officer

Construction Contract No.:

PROJECT

AGREEMENT made between the CONTRACTOR
and the Community Liaison Officer....., hereafter
referred to as the CLO, for the appointment and employment of a CLO for the duration of the work in respect of the
above named construction contract.

1. THE PARTIES HAVE AGREED THAT

The CLO will be employed by the CONTRACTOR on a temporary basis for the duration of the work from the date of signing this agreement to the date of practical completion as defined in the Contract, subject to all the conditions set out below.

2. THE DUTIES OF THE COMMUNITY LIAISON OFFICER SHALL BE:

1. to keep the community informed on the progress of the project;
2. to keep the Contractor informed on relevant Community affairs and possible grievances;
3. to manage the recruitment of workers from the Sub-Council Job-Seekers Database;
4. to assist the Contractor's supervisory staff in the management of the workers.

3. THE FOLLOWING CONDITIONS OF EMPLOYMENT SHALL APPLY:

The Conditions of Temporary Employment as applicable on this Contract for the workers recruited from the Community shall apply equally to the CLO, except that the rate of remuneration shall be **R365.00** per working day. These conditions that apply are listed below as they appear in the Contract of Temporary Employment:

- 3.1 If required to work on a statutory public holiday or Saturday or Sunday the payment will be double the amount stated in the previous paragraph.
- 3.2 Maximum hours of work:
 - (i) 9¼ hours per day
 - (ii) 45 hours per week;
 - (iii) 5 days per week;
 - (iv) 5 hours without an interval, whereupon there shall be an interval of at least 30 minutes;
 - (v) A spread-over period of 12 hours.
- 3.3 The CLO shall be entitled to payment where he is prevented from working by reasons which are within the control of the Contractor.
- 3.4 On days when it is raining the Contractor may, before 9 a.m., decide not to open the site and there will be no pay.

If the Contractor closes the site between 9 a.m. and 1 p.m., the CLO will be paid half the daily wage.

If the site works later than 1 p.m., the CLO will be paid the full daily wage.

- 3.5 Workers and the CLO will not be permitted to work under conditions of:
- (i) undisciplined or unruly behaviour;
 - (ii) insubordination to Team Leader, Supervisors or Management;
 - (iii) abuse of intoxicating substances;
 - (iv) criminal actions by the employee;
 - (v) strike action or political stayaways.
- 3.6 Workers, including the CLO, may be dismissed after two official written warnings for the following behaviour:
- (i) undisciplined or unruly behaviour;
 - (ii) insubordination to Team Leader, Supervisors or Management;
 - (iii) abuse of intoxicating substances;
 - (iv) wilful or negligent damage to or loss of machines or equipment.
- The Contractor shall ensure that he has statements from at least two witnesses concerning any of the above situations.
- The Contractor shall inform the CLO within 24 hours of any warning issued to workers employed from the Job-Seekers Database.
- 3.7 The CLO will be paid on a Friday afternoon every two weeks, one week in arrears.
- 3.8 The CLO shall be given a statement with each payment on which is recorded:
- (i) the name of the Contractor;
 - (ii) the CLO's name;
 - (iii) the number of days worked by the CLO;
 - (iv) the rate per day;
 - (v) the details of any deductions made;
 - (vi) the actual amount paid to the CLO.
- 3.9 No deduction shall be made from the remuneration except where the CLO consents in writing or unless the Contractor is permitted or required to do so by law or the order of any competent court.
- 3.10 The CLO shall be supplied free of charge with all health and safety equipment required by the Occupation Health and Safety Act. The equipment shall remain the property of the Contractor.
- 3.11 The Contractor must give the CLO at least one week's notice of the termination of the Contract of Temporary Employment. If this is not done, the CLO must be paid earnings for five days. This condition does not apply if the CLO is dismissed.
- 3.12 At the end of the period of temporary employment, the Contractor shall provide a Certificate of Service recording the Contractor's name, the CLO's name and address, the period of service, the type of work on which the CLO was engaged and the rate of remuneration on termination.

4. TERMINATION OF AGREEMENT

- 4.1 If the CLO can no longer perform and execute his/her duties as detailed in this agreement, this agreement will be terminated without prejudice to any rights under this agreement.

5. THE CONDITIONS OF THIS AGREEMENT

- 5.1 The parties expressly declare that this agreement contains all the conditions negotiated between them, and no condition or stipulation not contained herein shall be binding upon the parties.

6. **THUS AGREED AND SIGNED BY THE PARTIES:**

Contractor:

Community Liaison officer:

Date:

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS,
(RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C1.9 Works Project Acceptance/Refusal Notice

This form must be returned to the offices of the Employer's Agent by no later than the closing date and time for receipt of Works Project Acceptance/Refusal Notices stated in the Works Project contract document.

I/We herewith

Accept

☐

Refuse

☐

Tick applicable box

the opportunity afforded to me/us by the Langeberg Municipality to participate in the work allocation process as set out in the Work Allocation Procedures for the work specified in the Works Project contract document.

I/We accept that no contractor will be allocated work unless the contractor has demonstrated to the satisfaction of the Employer that he has the resources, including a site specific construction manager, required for this Works Project.

I/We agree to the construction time period specified in the Scope of Work.

Caution

The Employer will impose sanctions on Contractors that undertake Works Projects and perform poorly. Sanctions may include penalties, denial of the next Works Project and possible termination of contracts with removal from panels. The contractor's attention is drawn to Contract Data Clauses 5.13.3 and 9.2.1.3.

Declaration (to be completed by a contractor who accepts):

With reference to condition 8 in Section 2 in Schedule 19 Preferencing Schedule in Part 2.2 Returnable Schedules in the framework contract document, I/we declare that I/we **DO** ☐ / **DO NOT** ☐ (tick one box as applicable) intend sub-contracting more than 25% of the value of the Works Project contract to sub-contractors that do not qualify for at least the points that I/we as prime contractor qualified for in my/our framework contract.

CONTRACTOR'S NAME:

AUTHORISED CONTACT PERSON (NAME):

SIGNATURE:

DATE:

Part C2: Pricing Data

	Pages
C2.1 Pricing Assumptions.....	217 – 219

C2.1 Pricing Assumptions

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

These Pricing Assumptions are applicable to the Schedules of Rates in this document. Pricing Assumptions applicable to the Bills of Quantities in Works Project contract documents are provided in such documents.

1. The method of measurement published by the South African Bureau of Standards in clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments in the respective "Measurement and Payment" clauses in the particular specifications contained in Part C3.4 Construction in the Scope of Work.
2. Descriptions in the Schedules of Rates are abbreviated and comply generally with those in the Standardised Specifications. The measurement and payment clauses of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Schedules of Rates, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.
3. The measurement and payment clauses in a specification in which further information regarding the scheduled items is given, are referenced under "Item" (pay items) in the Schedules of Rates. The referenced clauses are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the Contract Documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, eg. G for SANS 1200 G.
4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
5. No quantities are set out in the Schedules of Rates and the Contractor will be required to undertake whatever quantities may be directed by the Employer's Agent from time to time in the relevant Works Project. The final Contract Price for each completed Works Project shall be computed from the actual quantities of work done, valued at the relevant rates (refer to Clause 12 in these Pricing Assumptions in this regard).
6. Rates inserted in the Schedules of Rates are deemed to be based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards).
7. The rates (excluding VAT) inserted in the Schedules of Rates shall be the full inclusive rates for the work described under the several items. Such rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable rates shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith shall be provided for and included in the rates tendered for such items.

8. **A rate is to be entered against each item in the Schedules of Rates.**

If a nil rate (i.e. "nil" or "0.00") is entered against an item, it will be considered that there is no charge for that item.

An item against which no rate (or rates, in the case of rate categories if provided) is/are entered, or if anything other than a rate or a nil rate (for example, left blank, a zero, a dash or the word “included” or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item.

Tenderers tendering for Panel 1 Conventional Construction must complete Schedules as indicate below.

Tenderers tendering for Panel 2 Pipe Bursting must complete Schedules as indicated below,

Tenderers tendering for Panel 3 CIPP must complete Schedules as indicated below.

(Tenderers tendering for all three panels must complete ALL Schedules

Tenderers must indicate in the Form of Tender, which panels they are tendering for.

SCHEDULES REQUIRED	Panel 1	Panel 2	Panel 3
	Water	Sewer	Cured-In-Place-Pipe (CIPP) Lining
	Reticulation	Reticulation	
Section A: Preliminary And General (Small Works)	A	A	A
Section B: Site Clearance	B	B	B
Section C: Earthworks (Pipe Trenches)	C	C	C
Section D: Concrete Kerbing and Channelling	D	D	D
Section E: Bulk Pipe Cleaning	E	E	E
Section F: CCTV Inspections	F	F	F
Section G: Overpumping	G	G	G
Section H: Sewers		H	H
Section I : Medium Pressure Pipelines	I		
Section J: Horizontal Directional Drilling	J		
Section Kw: Pipe Bursting (Water)	KW		
Section Ks: Pipe Bursting (Sewer)		KS	
Section L: Cured-In-Place-Pipe Lining			L
Section MW HDPE Sliplining	MW		
Section M: Sand Traps and Screens		M	
Section N: Concrete (Structural)	N	N	

Tenderers shall provide rates for each item specified in the respective Schedules.

If the respective Schedules are not properly and fully completed, the tender will be rejected.

No unauthorized amendment shall be made to the Schedules of Rates or any part of the Pricing Data. If such amendment is made, the tender will be rejected.

The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonable of such rates.

9. The units of measurement described in the Schedules of Rates are metric units. Abbreviations which may be used in these Schedules of Rates are as follows:

m	=	Metre	h	=	hour
km	=	Kilometre	t	=	ton (1000 kg)
m2	=	square metre	No.	=	number
m3	=	cubic metre	sum	=	lump sum
m3.km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
l	=	Litre	Prov sum	=	Provisional sum
day	=	Working day	%	=	per cent

10. The Tenderer may not group a number of items together and tender one lump sum for such group of items.
11. The tendered rates shall remain valid and binding, subject to contract price adjustment, if applicable, for the full duration of the framework contract.
12. Tenderers shall provide rates for the execution of items as specified in the Schedules of Rates. Unless otherwise described in the items in the Schedules of Rates, all rates (sums in particular) apply to individual

Works Project contracts. Framework Contract pay items shall be initial one-off payments in the Framework Contract.

The rates provided in the Schedules of Rates shall be used in the allocation of individual Works Projects in accordance with Clause 2.6 in Part C1.2 Contract Data and the Procedures for the allocation of Works Projects referred to therein.

13. Tenderers shall provide rates (excluding VAT) for each required rate category (if provided) for each item specified in every schedule in the Schedules of Rates (refer to clause F.2.10.5 in Part T1.2 Tender Data). Prime Cost and Provisional Sums will be multiplied by a factor (quantity) to be provided by the Employer at Works Project stage only.
14. Tenderers are referred to clause F.1.6.1 in Part T1.2 Tender Data with regard to working within the Stellenbosch municipal area, as shown on the drawings and as tabled therein.

Rates submitted in the respective Schedules of Rates shall apply to Works Projects executed anywhere within the Stellenbosch municipal area.
15. The Employer will only order those quantities of work items, which it actually requires for execution in a Works Project from time to time. The Employer reserves the right not to order any quantities at all depending on circumstances and subject to operational requirements.
16. The procedures for allocation of Works Projects are specified in Part C1.2 Contract Data (refer to Clause 2.6).
17. Schedules of Rates submitted in electronic format will not be accepted

The pages of the issued Schedules of Rates should not be removed from the tender document.
18. Tenderers are referred to Clause E8 Measurement and Payment in the Environmental Management (EM) Specification in Part C3.5 in the Scope of Work for the basic principles of measurement and pricing of the EM Specification.
19. Tenderers are referred to Clause 6.8.2 in Part C1.2 Contract Data regarding contract price adjustment.

Part C3: Scope of Work

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C3.1 Description of the Works	221 – 228
C3.2 Engineering	229 – 230
C3.3 Procurement	231 – 232
C3.4 Construction	233 – 319
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Status

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Standardised Specification, particular specification or any drawings, the order of precedence, unless otherwise specified, is:

Drawings
Scope of Work (Parts C3.1, C3.4, C3.5 and C3.6)
Particular Specifications
SANS Standardised Specifications

C3.1 Description of the Works

CONTENTS

- 3.1.1 EMPLOYER'S OBJECTIVES
- 3.1.2 OVERVIEW OF THE WORKS
- 3.1.3 EXTENT OF THE WORKS
- 3.1.4 LOCATION OF THE WORKS
- 3.1.5 TEMPORARY WORKS

3.1.1 EMPLOYER'S OBJECTIVES

The Employer's objectives are for the replacement of existing sewers and watermain s either by conventional open cut trench pipe infrastructure construction method or the replacement of pipes using trenchless methods of construction by Pipe Bursting or Cured-In-Place-Pipe (CIPP) Lining (sewer only) and the upgrading of the Robertson Siphon. The works will mostly be executed in a developed urban environment.

The description of the project contained in the Scope of Work is merely an outline of the Contract Works and shall not limit the work to be carried out by the Contractor under this Contract. Details of some of the major items are given in this section and approximate detailed quantities for each type of work to be carried out in accordance with the Contract Documents are included in the Schedule of Rates.

3.1.2. OVERVIEW OF THE WORKS

This tender covers the installation of new watermain s, sewers and manholes and the replacement, upgrading or lining of existing watermain s, sliplining of pipes using HDPE liner, sewers and manholes.

Work will be awarded as Works Projects as and when required by the Langeberg Municipality for the duration of the term tender framework contract and are to be executed by contractors allocated Works Projects through a secondary selection process out of panels of contractors. The Works Projects may be located anywhere within the Langeberg municipal area.

3.1.3. EXTENT OF THE WORKS

Work items under this term tender contract may include any one or more of the following:

- Establishment on site by the contractor
- The supply of labour, tools, equipment, materials and supervision to complete the work
- Setting out of the works
- Accommodation of vehicular traffic and pedestrians during all construction work
- Maintenance of the works during and after construction.
- Excavations
- Dewatering of excavations
- CCTV inspection, assessment and final inspection
- Pipeline cleaning and root removal
- Laying of new sewer pipelines and manholes by conventional open cut excavation methods
- Road crossing by Horizontal Directional Drilling (HDD)
- Replacement of existing sewer pipelines by Pipe Bursting
- Lining of existing sewers by Cured-In-Place-Pipe (CIPP) Lining
- Sliplining of pipes using HDPE liner
- Isolation of sewer pipelines and overpumping or bypassing of live sewer flows
- Testing of new sewer pipelines
- Laying of new watermain s by conventional open cut excavation methods
- Replacement of existing watermain s by Pipe Bursting
- Isolation of watermain s and provision of temporary water supply
- Testing of watermain s

- Reinstatement of roads, kerbs, sidewalks and private gardens
- Providing "As Built" data on completion of the Works Project
- Compliance with the Environmental Management Plan
- Compliance with the Health and Safety Specifications

The Works that are to be carried out will be specified in Works Project contract documents as and when required and as provided for in the Bills of Quantities therein. However, if during the course of construction conditions are found to differ from those anticipated, the Employer's Agent may modify the scope of the work to suit the prevailing conditions and circumstances.

Sewer Mains

The sewers to be replaced or maintained comprise mostly uPVC, AC pipes, fibre-cement pipes, clay pipes, GRP pipes, cast iron pipes, HDPE and pitch-fibre pipes and in some instances concrete pipes. Pipe sizes range from 100 mm diameter up to 1200 mm nominal diameters.

The sewer infrastructure comprises of brick structures, precast units, fibre-cement shafts and insitu cast concrete structures.

A method statement will be needed where replacement is required for pipe diameters larger than 300 mm diameter or for all complex projects and should be approved by the employer's representative before any work commences. A method statement that is not accepted by the Employer's Agent will be rejected and the contractor will be required to amend and re-submit the method statement for approval.

Water Mains

The water mains to be replaced comprise mostly fibre-cement pipes although other types of pipe material eg. cast-iron, HDPE, uPVC etc. may be encountered. Pipe sizes range from 110 mm diameter up to 400 mm nominal diameters.

A method statement will be needed where replacement is required for pipe diameters larger than 300mm diameter or for all complex projects and should be approved by the employer's representative before any work commences. A method statement that is not accepted by the Employer's Agent will be rejected and the contractor will be required to amend and re-submit the method statement for approval.

3.1.4. LOCATION OF THE WORKS

Each Contractor will be required to work anywhere within the boundaries of the Langeberg municipal area as shown on the attached map. The map is included under Part C4: Site Information.

Site conditions will vary and it is anticipated that most of the work assigned will be within an urban environment, which will range from industrial areas to residential areas.

The rates submitted in the Schedule of Rates shall apply for working anywhere within the Langeberg municipal area.

3.1.5 TEMPORARY WORKS

3.1.5.1 SITE FACILITIES AVAILABLE

3.1.5.1.1 Location of Camp Site

If required, the Contractor shall establish his camp at a location approved by the Employer's Agent. The Contractor shall make his own arrangements concerning the provision of water, electricity and other services for his own office.

The Contractor shall submit to the Employer's Agent his proposed siting and layout of all camps, stores, offices etc. within seven (7) days after acceptance of his tender. Proposals for disposal sites for sewage, waste and refuse shall be submitted to the Employer's Agent's Representative for approval.

Should the Contractor wish to use any areas outside the site as defined above, he shall negotiate for the use of and rent for, such additional areas, with the affected landowners. Any damage to or desecration of land outside the site shall be made good to the satisfaction of the landowner and the Employer's Agent at the Contractor's expense.

3.1.5.1.2 Occupation of the Site

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

The site of the works shall consist of all the separate areas associated with the work to be constructed under the Works Project, including the construction camp, any storage area on the site which the Contractor may require in addition to the area required for construction of the works and special works as defined by the limits of construction shown on the drawings, plus such additional length of road that is necessary for the erection of the traffic accommodation road signs on the approaches to the works.

The site of the works includes portions of existing public roads and footpaths, which will remain in use during the course of the work. Every effort shall be made by the Contractor to minimise the disruption to existing pedestrian and traffic flows during construction. No roads or traffic lanes may be closed without the prior written approval of the Employer's Agent and traffic shall be accommodated as shown on the drawings.

Where existing roads are used, they shall be protected from damage by extraordinary traffic. The Contractor shall immediately repair any damage done by him to fences, gateways, drains or to any other structure during the execution of the Contract and shall leave everything in the same state as it was found by him.

The Contractor shall as far as possible confine his operations to within the limits of the site or land provided by the Employer, but if this is inadequate for his purpose, he shall make all arrangements for any further land he may require and shall pay all costs and charges in this connection.

The Contractor shall afford all reasonable pedestrian and/or vehicular access to all owners or occupiers of properties abutting the works to the satisfaction of the Employer's Agent.

Workmen employed by the Contractor will not be permitted on private property abutting the works during its progress unless such presence is required to successfully complete the work and permission from the owner/occupier has been granted.

3.1.5.1.3 Source of Water Supply

The Contractor shall make his own arrangements for obtaining potable water for construction and domestic purposes. Water will be supplied at no cost to the contractor. The reticulation in the existing infrastructure adjacent to the site is the nearest available source of water. The Contractor SHALL RECORD ALL WATER USAGE and report such in writing to the Langeberg Municipality. The contractor is to make provision for standpipes and hoses required.

3.1.5.1.4 Source of Power Supply

The Contractor shall make his own arrangements for obtaining power from the Langeberg Municipality. If the Contractor chooses not to arrange a temporary electricity supply to the site he will have to provide alternative facilities to supply electricity for whatever purpose.

3.1.5.1.5 Sewerage Connection

The Contractor shall make his own arrangements for a connection to the existing foul sewer main and he shall provide a sufficient number of toilets for his staff. Portable toilets will be acceptable.

3.1.5.2 SITE FACILITIES REQUIRED

No specific facilities are required on the site for the Employer's Agent or his representative, but the Contractor will make a desk and chair available for the Employer's Agent or his representative (in his office at no additional cost) if required.

3.1.5.3 CONSTRUCTION TIME PERIOD

3.1.5.3.1 Time for completion

The time for completion, as stated in the Contract Data in terms of Clause 5.14 of the Conditions of Contract, is the time specified by the Employer in each Works Project. The Contractor shall plan and programme his construction sequence for completion within the time period specified.

3.1.5.3.2 Programme Type

The construction programme shall be in the form of a bar chart or in any other form acceptable to the Employer's Agent. The programme shall be drawn to a horizontal time scale. It shall be activity orientated showing interdependencies and the critical path, clearly related to the items or groups of items reflected in the Schedule of Quantities. It shall indicate the quantity of work that shall be carried out each month, but only major work items need be shown.

The programme shall allow and include for special non-working days and the number of days stipulated in the contract data for inclement weather. The programme shall include resource scheduling and balancing and the cash flow envisaged for the Contract. The critical path shall be clearly shown as a heavy double line.

The Contractor shall note the stipulated method of work and shall clearly indicate this on the construction programme. The proposed work sequence shall be subject to the approval of the Employer's Agent.

The Contractor shall update the construction programme on a monthly basis, taking cognisance of all factors affecting the programme. Due allowance shall be made by the Contractor in the tender sum for the cost of updating the programme. Any claim for extension of time shall be evaluated against the construction programme. Only programmes accepted and approved by the Employer's Agent shall be applicable.

3.1.5.4 FEATURES REQUIRING SPECIAL ATTENTION

3.1.5.4.1 Existing Services

Prior to commencing work, the Contractor shall confer with all Authorities and Departments concerned and obtain the necessary wayleaves for both overhead and underground services affected by the Works and shall satisfy himself that he has obtained all the relevant information required to complete the Contract. The contractor must apply for wayleaves within one (1) day of signing the acceptance form to avoid delays to Works Projects. Any planning wayleaves that the contractor may receive from the Council are not a transfer of rights. The Contractor shall carry out the works with the minimum interference to existing services. He shall co-operate with all Authorities and Departments concerned and he shall be solely responsible for carrying out the following operations and checks:

- (i) He shall inform all Authorities and Departments in good time before the correct stage of the construction is reached for the laying and/or relaying of any particular services.
- (ii) He shall set out the lines and levels of kerbs, pipes, culverts and any other necessary features of the Contract in order that Authorities and Departments are able to lay and/or relay services correctly.

It shall be clearly understood that obtaining the necessary wayleaves and any extra work, such as the removal of any portion of the Works already executed either by the Contractor or other Authority or Department and its subsequent re-execution, which is caused by the Contractor's failure to observe and carry out his responsibilities as specified, will be at his own cost.

If the Contractor considers that the progress of the works is being retarded by the failure of any Authority or Department to lay, remove or divert pipes, ducts, services, cables or poles within a reasonable time, he shall immediately notify the Employer's Agent in writing, stating clearly the number of days of delay claimed. The Employer's Agent will then decide whether such a claim is justifiable, and in the event of the claim being accepted he will hand to the Contractor a certificate stating clearly the number of days of delay sanctioned.

The cost of repairing any damage to services, due to miscalculations or negligence on the part of the Contractor or his failure to carry out the duties set out in this Clause, shall be borne by the Contractor.

(a) Protection of Overhead and Underground Services

Services and sub-surface obstructions likely to be affected by the work, based on available records and surveys, have been shown on the drawings. Although every care has been exercised in the presentation of the available data, the Employer cannot and does not vouch for the accuracy or completeness of the information shown. Whenever the Contractor deems it necessary to determine the exact location of an existing service or obstruction, he shall, at his own expense, make any examination that he may consider desirable in advance of the work, and the Employer does not accept any liability for loss, damage or delay to the Contractor as a result of the non-location or inaccurate location of services or obstructions.

Where no underground services are shown on the drawings or scheduled, but the possibility of their presence can be reasonably inferred, the Contractor shall in collaboration with the Employer's Agent, search for such services to establish their positions well in advance of the work. A full report shall then be submitted in good time to the Employer's Agent, to enable the necessary arrangements for the protection, removal or diversion of the services before work is commenced in their vicinity.

In the event of damage to existing services, the Contractor shall take such immediate action as is necessary to prevent further damage or danger to life or property and shall immediately notify the Employer's Agent who will issue instructions as to the necessary repairs or protective measures to be taken. The cost thereof shall be borne by the Contractor irrespective of whether the repairs or protective measures were carried out by him or by or on behalf of the service authority or department concerned.

As soon as an underground service not shown on the drawings is discovered, it shall be deemed to be a known service and the Contractor will be held responsible for any subsequent damage to it. If such service is damaged during the course of its discovery, the Contractor will be reimbursed for the cost of making good such damage, unless it is established by the Employer's Agent that the Contractor did not exercise reasonable diligence and care and that the damage was avoidable.

(b) Existing Services

"Existing service" shall include any service which has been temporarily taken out of service to allow for the execution of the works or which has been taken out of service as a result of an event which necessitated the execution of the works.

(c) Condition of Existing Services

The Contractor acknowledges that he has inspected and examined all known existing services and all existing services subsequently discovered, as contemplated in (a) above and is satisfied that all such services were in an acceptable and serviceable state at the commencement of the works, alternatively, upon discovery thereof as contemplated in (a) above.

In the event of a dispute as to the acceptability and/or serviceability of an existing service at the commencement of the works or upon the discovery of such service, the Contractor shall bear the onus of proving that the service in question was not in an acceptable and/or serviceable state at the commencement of the works.

(d) Maintenance, Protection and Relocation of Existing Services

During the course of the works, all existing services including traffic signals, water mains, sewers and stormwater reticulation, electricity transmission and telephone lines, cables, poles and conduits whether in service or not shall be protected, supported and maintained to the satisfaction of the service authority or department concerned and the Employer's Agent. The Contractor shall bear all costs in this regard.

Where a bank of underground ducts, cables, etc are crossed over a distance of less than 1.0m they shall be regarded as a single crossing. Hydrants under pressure, water main valve covers and manholes shall be kept unobstructed and accessible at all times.

The covers and frames of service manholes, catchpits, water mains, valve boxes and sewers will have to be adjusted where they are affected by the roadworks.

(e) Work in Close Proximity to Existing Services

The Contractor shall note that no mechanical excavators or vibratory type compactors may be used within three (3) metres of any telecommunications or electrical services. No pegs or stakes shall be driven into the ground in the vicinity of underground services unless their exact positions have been determined.

The Contractor's attention is drawn to the following with regard to work done in the proximity of ESKOM and other electrical services:

MACHINERY AND OCCUPATIONAL SAFETY ACT (Act No 6 of 1983) WITH REGULATIONS

D16 (7) Excavations

"The builder or excavator shall ascertain as far as practicable the location and nature of underground services likely to be affected by the excavation and take such steps as may be necessary to prevent danger to persons."

THE ELECTRICITY ACT (Act No 40 of 1958)

Section 51(3): Offences and Penalties

"Any person who without legal right (the proof of which shall be upon him) cuts or damages or interferes with any apparatus for generating, transmitting or distributing electricity, shall be guilty of an offence and liable on conviction to a fine not exceeding R1 000,00 or to imprisonment for a period not exceeding twelve months."

The Contractor shall take the above into account in the drawing up of his construction programme and in the calculation of his tendered rates, and shall note that no additional payment or compensation will be allowed for any additional costs or delays incurred as a result of compliance with these regulations, except as measured and paid under the Items listed in the Schedule of Rates.

The Contractor shall allow all reasonable access to the representatives of any Authority or Department for the purpose of maintaining, laying and/or relaying any services, cables or mains during the period of the Contract.

Permanent alterations to existing services ordered in writing by the Employer's Agent, and for which no separate provision has been made in the Schedule of Rates, will be paid for under dayworks if required.

3.1.5.4.2 Services to be constructed / relocated by others

Where applicable, details of proposed services which will have to be constructed / installed / relocated by others under the Works project will be provided.

3.1.5.4.3 Work on Private Property

The contractor's attention is drawn to the fact that certain of the work will be carried out on and in close proximity property. These properties are shown on the Contract Drawings. Official notices will need to be issued by the Contractor for work on private property. Reasonable notice must be given. This notice period is deemed to be 7 days.

3.1.5.4.4 Protection of Structures on Private Property

The contractor's attention is drawn specifically to the close proximity of the works to existing structures on private property. Insurance is to be arranged by the Contractor in accordance with Clause 8.6.1 of the General Conditions of Contract (2015) to cover accidental damage to these structures, the excess of which is payable by the Contractor in event of a claim.

The Contractor shall take all necessary precautions required in terms of the Occupational Health and Safety Act, Act 85 of 1993 and those regulations under the Machinery and Occupational Safety Act, 1983 (Act No. 6 of 1983) and the Mines and Works Act, 1956 (Act No. 20 of 1956) still remaining in force, including shoring where necessary to ensure the safety of any structure at risk. The contractor's attention is drawn to the specific risks of working in a residential area, with children present. Excavation and open manholes in particular will be supervised and/or secured at all times.

All garden fences and structures disturbed as a result of the works are to be reinstated to the satisfaction of the affected property owner and the Employer's Agent.

3.1.5.4.5 Surveys and Beacons

The Contractor shall preserve, as far as is possible, any existing beacons and use them to place his own beacons for setting out and control of the work under this Contract.

Should a Property or a Trigonometrical Survey beacon be buried or displaced by the Contractor, he shall bear the cost of searching for the beacon and, if so instructed, arrange for the checking of its position and/or replacement.

It may be that during the course of the construction of the Works certain pegs or beacons may be lost or disturbed due to unavoidable circumstances such as the close proximity to the works. Prior to commencing any operations in the vicinity of such pegs or beacons, the Contractor shall notify the Employer's Agent that loss or disturbance of such pegs or beacons appears unavoidable. The Employer's Agent may agree in writing that such beacons could not reasonably be preserved, and only those beacons so signed for will be replaced at the Employer's cost.

The cost of replacing pegs or beacons disturbed due to unavoidable circumstances as determined by the Employer's Agent shall be paid for under dayworks if required.

3.1.5.5 SECURITY

The Contractor shall take every precaution to ensure safety and to protect the Works from theft and vandalism. The Contractor shall be responsible for the safety and security of his personnel, materials on site and the Works in general at all times. The Contractor shall therefore acquaint himself with the current situation in the area with regard to safety and security (liaising with the local police as necessary) and shall provide all security measures, including the employment of accredited security services, as deemed necessary to comply with the requirements under this clause on the Contract.

A pay item is included in the Schedule of Rates / Bill of Quantities to cover the cost of taking these precautions, together with any fencing, security guards, and any other incidental security measures, which the Contractor may require for the contract.

3.1.5.6 STANDARD OF MATERIALS, WORKMANSHIP, TESTING AND PERFORMANCE

The attention of Tenderers is particularly drawn to the high standard of materials, workmanship, testing and performance applicable to his Contract as a whole and he shall convey this requirement to his proposed Sub-Contractors.

The Contractor will carry out control testing of materials and workmanship as required in terms of the specifications. Where necessary, the Employer's Agent may carry out acceptance control testing. The Employer will not pay claims or grant extension of time for delays to the works resulting from the awaiting of test results. Testing as required by the Employer's Agent will be effected as promptly as possible but it is in the Contractors own interest to submit material samples and other components of workmanship for testing in good time to assist in avoiding or minimising delays.

3.1.5.7 WEATHERPROOF PROTECTION FOR WORKERS

All staff required to continue working during rain shall be provided with oilskins and rubber knee boots, or other approved protective clothing and footwear.

3.1.5.8 NIGHT WORK AND WORK ON PUBLIC HOLIDAYS

Where the Contractor requires staff to work overtime, he shall make the necessary arrangements with the Employer's Agent and obtain written approval from the Employer's Agent. The Contractor shall bear the cost of his overtime work.

3.1.5.9 CONSTRUCTION IN CONFINED AREAS

It will be necessary for the Contractor to work within confined and restricted areas. No additional payment will be made for work done in such areas, despite indications to the contrary in the Standard Specifications.

3.1.5.10 HEALTH AND SAFETY PLAN

Prior to commencing work, the Contractor shall submit a site specific Health and Safety Plan and an Asbestos Work Plan, compiled in accordance with the Health and Safety Specifications in C3.5: Management to the Employer's Agent for approval. The Contractor may not commence construction without the Employer's Agent's approval of the Health and Safety Plan and the Asbestos Work Plan.

3.1.5.11 ACCOMMODATION OF TRAFFIC

Accommodation of Traffic is covered in Section E1500 in C3.4 Construction: Accommodation of Traffic Particular Specifications.

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

- (viii) The Contractor shall submit proposals in connection with all signs and accommodation of traffic to the Employer's Agent for approval.

The traffic shall be accommodated on the existing surfaced carriageway and shoulders. No bypasses or temporary deviations shall be constructed. Accommodation of traffic will generally be carried out by closing off one lane of traffic at a time and accommodating the traffic on the other lane(s). During non-working days and the period of the year end break (construction industry annual shut-down), the Contractor will be required to shut down normal construction activities and ensure that the total surfaced width is available to public traffic. Only emergency work will be allowed. The Contractor will be required to patrol during these non-working periods and ensure that all temporary traffic-control facilities are in place and functional and will have a team who will be required to be on standby for any situation that may arise.

Details of special traffic accommodation for the Works Project will be provided.
Add the following:

No blocking of the road without the approval from the Employer's Agent.

3.1.5.12 PROVISION OF "AS BUILT" DATA

On completion of the "Works Project", the Contractor will be required to submit accurate "As Built" information of the completed works to the Employer's Agent. This information will be in the form of co-ordinates and levels (X,Y,Z) (WGS 84). Refer to Part C3.2: Engineering under point 5. AS-BUILT DATA PROTOCOL.

3.1.5.13 ENVIRONMENTAL REQUIREMENTS

The Contractor shall take particular note of the environmental requirements contained in the Environmental Specifications in Part C3.5: Management.

Personnel and plant shall not enter property beyond the road reserve boundary irrespective of whether or not the boundary is fenced.

The Contractor shall take every precaution to avoid damage to vegetation within that area of the road reserve which falls outside the designated work area is indicated on the drawings. Any damage caused is to be repaired at the Contractor's expense.

Storage and stockpiling of materials within the road reserve will not be permitted without the written consent of the Employer's Agent. Excess material from excavations and waste material shall be spoiled off site at suitable locations.

Details of special environmental requirements for the Works Project will be provided.

C3.2 Engineering

CONTENTS

- 3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX
- 3.2.2 EMPLOYER'S DESIGN
- 3.2.3 DESIGN BRIEF
- 3.2.4 DRAWINGS
- 3.2.5 AS-BUILT DATA PROTOCOL

3.2.1 DESIGN SERVICES AND ACTIVITY MATRIX

- a) The Employer is responsible for the design of the permanent Works as reflected in the Contract documents unless otherwise stated.
- b) The Contractor is responsible for the design of the temporary Works, inclusive of shoring, traffic accommodation and temporary over-pumping of sewage and their compatibility with the permanent Works.
- c) The Employer is responsible for specifying the required pipe details.
- d) The Contractor shall supply the as-built drawings as detailed under the Contract Data.

3.2.2 EMPLOYER'S DESIGN

The permanent works included in this contract has been designed by the Employer. The detail of the works is indicated in the specifications and drawings which will be issued at "Works Project" stage.

3.2.3 DESIGN BRIEF

The contractor shall be responsible for the design of the temporary works as defined above

3.2.4 DRAWINGS

The drawings, if any, issued with this tender document are attached in order to give an overview of the term tender project.

Construction drawings will, in terms of the Conditions of Contract, be issued to the Contractor by the Employer's Agent, as appropriate, prior to the date for commencement with Works execution, and from time to time as required.

The Works Project shall be constructed in accordance with the issued design drawings, if any.

The Works Projects shall be carried out in accordance with the reduced drawings listed in C5 of the tender documents and form part of the contract documents as Volume 3.

Only figured dimensions shall be used and drawings shall not be scaled unless otherwise instructed.

Construction drawings will, in terms of the Conditions of Contract, be issued to the Contractor by the Employer's Agent's Representative, as appropriate, prior to the date for commencement with Works execution, and from time to time as required.

3.2.5 AS-BUILT DATA PROTOCOL

The Contractor shall be responsible for the preparation of "as built" drawings and shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends and all other underground infrastructure shall be given by either co-ordinates, or stake value and offset. Levels must also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Employer's Agent's Representative on a regular basis.

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

The contractor must provide all As-built information in the format as detailed in the “**Protocols Regarding Civil As-built Plans and GIS Data**”, which are attached in C3.6 Annexes.

C3.3 Procurement

CONTENTS

- 3.3.1 PREFERENTIAL PROCUREMENT
- 3.3.2 SUB-CONTRACTING PROCEDURES

3.3.1 PREFERENTIAL PROCUREMENT

The Works, and Works Projects, shall be executed in accordance with the conditions associated with the granting of preferences detailed in the **Preference Schedule** where preferences are granted in respect of BBBEE/specific goals.

The declarations made in the **Preference Schedule** of the framework contract will be used in the evaluation of tender offers as described in clause F.3.11 in Part T1.2 Tender Data. Once appointed to a panel, Contractors will be required, as applicable, to complete the declaration in respect of sub-contractors in the Works Project Acceptance/Refusal Notice for the particular Works Project, in accordance with clauses P.2.1.4 and P.3.4 in Part A1.2 Work Allocation Procedures in the Works Project contract document.

Financial penalties, as described in the **Preference Schedule**, shall be applied in the event that the Contractor is found to have breached and of the conditions contained in the **Preference Schedule** (unless proven to be beyond the control of the Contractor)

Notwithstanding the application of penalties, the Contractor's attention is drawn to other sanctions that may be applied by the Employer (listed in the **Preference Schedule**) with due consideration to the circumstances.

3.3.2 SUB-CONTRACTING PROCEDURES

3.3.2.1 Monitoring the use of sub-contractors

Notwithstanding the restriction on sub-contracting as described on the **Preference Schedule**, it is recognised that sub-contracting is an integral part of construction, which the conditions of contract make provision for.

In order, however, to comply with the requirements of the **Preference Schedule**, the Contractor shall submit to the Employer's Agent, on a monthly basis, a **B-BBEE Sub-Contract Expenditure Report**. The format of this report is provided in Annex 2 attached.

The Contractor shall submit to the Employer's Agent documentary evidence in accordance with the applicable codes of good practise of the B-BBEE status level of every sub-contractor employed by the Contractor. Until such time as documentary evidence as described above has been submitted to the Employer's Agent, a sub-contractor shall be deemed to be a non-compliant contributor. The Contractor shall furthermore, on the written request of the Employer's Agent, provide documentary evidence showing the value of work sub-contracted to any or all of the sub-contractors employed by the Contractor.

3.3.2.2 Procedure for the selection of sub-contractors/suppliers

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

Where the monetary allowance is less than or equal to R200 000, the Contractor shall invite three quotations from suitably qualified sub-contractors/suppliers for the required work or items. The selection of the three sub-contractors/suppliers shall be in consultation with, and to the approval of the Employer's Agent. The evaluation of the quotations received must include a preference points system as described in F.3.11 of the Tender Data.

Where the monetary allowance is in excess of R200 000, an open competitive tender process shall be followed in respect of the selection of a sub-contractor/supplier for the required work or items. In such circumstances, tender documentation will be prepared by the Employer's Agent in consultation with and to the approval of the Contractor, invitations to tender will be advertised in the media by the Employer's Agent on behalf of the Contractor, and a sub-contractor/supplier will be selected from the responses received, by the Contractor and Employer's Agent in consultation. The evaluation of the offers received must include a preference points system as described in F.3.11 of the Tender Data. The Contractor must satisfy him/herself that the selected sub-contractor/supplier can meet the requirements of the sub-contract /supply agreement and may, on reasonable grounds, elect not to employ a particular sub-contractor/supplier.

In both instances above (less than or equal to R200 000 or in excess of R200 000), the contractual relationship between the Contractor and sub-contractor/supplier shall be as described in Clause 4.4.3 of the General Conditions of Contract.

C3.4 Construction

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- 3.4.1.1 STANDARDISED SPECIFICATIONS
- 3.4.1.2 TRADE NAMES OR PROPRIETARY PRODUCTS
- 3.4.1.3 PROJECT SPECIFICATIONS REFERRING TO THE STANDARDISED SPECIFICATIONS
- 3.4.2.1 PARTICULAR SPECIFICATIONS
- 3.4.2.2 PROJECT SPECIFICATIONS REFERRING TO THE PARTICULAR SPECIFICATIONS

3.4.1.1 STANDARDISED SPECIFICATIONS

The following latest SANS 1200 Standardized Specifications for Civil Engineering Construction are applicable:

SANS 1200 A	:	General
SANS 1200 C	:	Site clearance
SANS 1200 D	:	Earthworks
SANS 1200 DB	:	Earthworks (pipe trenches)
SANS 1200 DK	:	Gabions & Pitching
SANS 1200 DM	:	Earthworks (Roads, Subgrade)
SANS 1200 G	:	Concrete (Structural)
SANS 1200 L	:	Medium-pressure pipelines
SANS 1200 LB	:	Bedding (pipes)
SANS 1200 LC	:	Cable Ducts
SANS 1200 LD	:	Sewers
SANS 1200 LE	:	Storm water Drainage
SANS 1200 LF	:	Erf connections (water)
SANS 1200 LG	:	Pipe Jacking
SANS 1200 ME	:	Sub base
SANS 1200 MF	:	Base
SANS 1200 MG	:	Bituminous Surface Treatment
SANS 1200 MH	:	Asphalt Base and Surfacing
SANS 1200 MJ	:	Segmented Paving
SANS 1200 MK	:	Kerbing and Channelling
SANS 1200 MM	:	Ancillary Roadwork

Particular Specifications included after the Standard Specifications shall apply and form part of this contract.

3.4.1.2 TRADE NAMES OR PROPRIETARY PRODUCTS

Bid specifications may not make any reference to any particular trademark, name, patent, design, type, specific origin or producer, unless there is no other sufficiently precise or intelligible way of describing the characteristics of the work, in which case such reference must be accompanied by the words "or equivalent", or "or similar approved".

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

3.4.1.3 PROJECT SPECIFICATIONS REFERRING TO THE STANDARDISED SPECIFICATIONS

The following variations and additions to the SANS 1200 Standardized Specifications referred to in clause 3.4.1.1 apply to this Contract. The prefix PS indicates an amendment to SANS 1200. The letters and numbers following these prefixes respectively indicate the relevant Standardized Specification and clause numbers in SANS 1200 to which the variation or addition thereunder applies.

PSA GENERAL

PSA 3 MATERIALS

PSA 3.1 Quality

All pipes, fittings and materials used in the works, must bear the official standardisation mark of the SANS where applicable. The mark on a pipe shall be visible from above after the pipe is installed.

The Employer's Agent's approval of all manufacturers' instructions with regard to installation of pipelines and sealing of joints between Reinforced Concrete manhole rings is required.

PSA 4 PLANT

PSA 4.1 SILENCING OF PLANT

Replace the contents of sub-clause 4.1 with the following:

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

The Contractor shall at all times and at his own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations."

Add the following:

"The Contractor will be required to obtain a noise exemption permit from the Langeberg Municipality."

PSA 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

Add the following paragraph before the existing first paragraph in subclause 4.2:

"The Contractor's buildings, sheds and other facilities erected or utilised on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be and if required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only a night-watchman may be on the Site after hours"

Delete "and first-aid services" in the second paragraph of subclause 4.2 and add the following:

"The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 10 workmen, which toilets shall be effectively screened from public view and their use enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

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

PSA 5 CONSTRUCTION

PSA 5.2 Watching, Barricading, Lighting and Traffic Crossings

The Contractor shall ensure that all roads adjacent to the site which may be affected by the works are kept in a safe condition for pedestrians and vehicular traffic.

Without limiting the Employer's Agent's right to request additional requirements in terms of the Specifications and the General Conditions of Contract, the following shall be regarded as the minimum requirements for security, temporary fencing and lighting.

PSA 5.2.1 Security

The Contractor shall take every precaution to ensure safety and to protect the Works from theft and vandalism. The Contractor shall be responsible for the safety and security of his personnel, materials on site and the Works in general at all times. The Contractor shall therefore acquaint himself with the current situation in the area with regard to safety and security (liaising with the local police as necessary) and shall provide all security measures, including the employment of accredited security services, as deemed necessary to comply with the requirements under this clause on the Contract.

A pay item is included in the Schedule of Rates / Bill of Quantities to cover the cost of taking these precautions, together with any fencing, security guards, and any other incidental security measures, which the Contractor may require for the contract.

PSA 5.2.2 Temporary Fencing of Excavations

The Contractor shall enclose all excavations with stout temporary orange barricade net fencing (1,8 m). In addition, he shall erect delineators alongside the road, adjacent to all open excavations, at 5 m intervals, and shall securely fix one line of red-and-white plastic warning tape of an approved design along the top of the fence for its full length.

The Contractor shall place New-Jersey barriers alongside the excavation/ trench to ensure that vehicles remain a safe distance away from the trench and to prevent that a vehicle crashes into the trench. The Contractor shall at all times ensure the safety of the public, traffic, pedestrians and labour is kept at all times and that the safety takes precedence over the construction works.

The Contractor shall backfill and reinstate the pipeline on a daily basis before proceeding with pipe installation at another section. The contractor shall backfill and reinstate as the pipe is being installed to prevent open holes/ excavations. All open trenches during the day shall be temporarily barricaded with orange netting as described above when not working in the area. If no other option exist or due to unforeseen circumstances the contractor cannot backfill the excavation the contractor shall ensure that all excavation/ trenches left open after hours shall be barricaded with new jersey barriers as described above.

PSA 5.2.3 Lighting

Open trenches which constitute a hazard to pedestrians or traffic shall be illuminated by red lights in the following manner:

At least two red lights shall be placed across the ends of open trenches, at a maximum spacing of 2 metres.

Red lights shall be placed along open trenches at 10 m intervals on the road side and at 3 m intervals along the pedestrian side, where applicable.

At least 1 red lamp shall be placed at each of the four corners of each pedestrian crossing and at least 2 red lamps at each of the four corners of each vehicular crossing.

All lamps shall be in position and burning between the hours of sunset and sunrise, and shall be provided with a chain and padlock and locked to suitable posts of prevent theft.

PSA 5.2.4 Accommodation of Traffic

Accommodation of traffic will be required along entrance / exit roads, where the new works tie-in to existing roads. Traffic may have to be deviated onto a half-width roadway or single lane route past / through the construction work area.

Accommodation of Traffic is covered in Section E1500 in C3.4 Construction: Accommodation of Traffic Specifications.

When working in roads or across any road, the Contractor shall submit drawings detailing the accommodation of traffic to the Employer's Agent for approval at least 14 days prior to construction. The deviation and signage shall be in accordance with the South African Road Traffic Signs Manual (SARTSM) and the details shown on the drawings.

The Contractor shall liaise and co-operate with the relevant traffic authorities regarding the accommodation of traffic on existing roads. The Contractor shall indemnify the Local Authority, as applicable, from all liabilities in respect of excavations and works on or adjacent to trafficked roads.

The Contractor shall provide and maintain in a proper condition all necessary barricades, lights, warning signals and all direction signs necessary to accommodate the traffic during these stages. The

Contractor shall also provide for flagmen at all deviations and/or obstructions where necessary. Open trenches shall be kept to a minimum and shall at all times be adequately demarcated, to protect pedestrians. The Contractor shall also ensure that access to properties affected by the works is maintained at all times.

The contractor shall be responsible for the safe and easy accommodation of all traffic and the maintenance of the vehicular and pedestrian access to private property for the duration of the contract and at any time when work is undertaken during the maintenance period. **Pedestrian access must be maintained at all times and vehicular access after working hours.**

No traffic deviations or rerouting shall take place until all barricades / delineators and signs are in place.

Temporary crash barriers shall be constructed when working in heavily traffic areas as instructed by the Employer's Agent.

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

Replace the heading and the contents of sub clause 5.4 with the following

“LOCATION AND PROTECTION OF EXISTING SERVICES”

PSA 5.4.1 Detection, Location and Exposure of existing services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent Contractor to be present on, under, over or within the Site.

Without in any way limiting his liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Employer's Agent, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where he intends to work. Neither the Employer nor the Employer's Agent offers any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Employer's Agent, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the further requirements of sub clauses 4.4 and 5.1.2.2 of SANS 1200 D (as amended) shall apply.

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

All services, the positions of which have been determined as aforesaid at the critical points, shall henceforth be designated as 'known services' and their positions shall be indicated by the Contractor on a separate set of drawings, a copy of which shall be furnished to the Employer's Agent without delay.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the site, it shall henceforth be deemed to be a known service and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the site shall apply. The Contractor shall notify the Employer's Agent immediately when any such service is encountered or discovered on the Site.

Whilst he is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to

- (a) known services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognizance being taken of such deviations in line and level which may reasonably be anticipated, and
- (b) any other service which ought reasonably to have been a known service in accordance with the provisions of this clause.

The Contractor shall also be liable for consequential damage in regard to (a) and (b), whether caused directly by the Contractor's operations or by the lack of proper protection.

No separate payment will be made to the Contractor in respect of his costs of providing, holding available on the Site and utilising the said detecting and testing equipment, nor for any costs incurred in preparing and submitting to the Employer's Agent the Drawings as aforesaid. These costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

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

PSA 5.4.2 Protection during construction

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all known services during the period which the Contractor has occupation and/or possession of the Site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising therefrom to the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

Unless otherwise instructed by the Employer's Agent, no services shall be left exposed after its exact position has been determined and all excavations carried out for the purpose of exposing underground services shall be promptly backfilled and compacted. In roadways, the requirements of sub clause 5.9 of SANS 1200 DB should be observed. In other areas compaction is to be to 90% modified AASHTO density.

PSA 5.4.3 Alterations and repairs to existing services

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

Should damage occur to any existing services, the Contractor shall immediately inform the Employer's Agent, or when this is not possible, the relevant authority, and obtain instructions as to who should carry out repairs. In urgent cases, the Contractor shall take appropriate steps to minimise damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor.

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

PSA 5.4.4 Liability for Damage and Insurance

The Contractor's attention is drawn to the relevant clauses of the General Conditions of Contract and Contract Specific Data regarding liability for damage to the Works, or property, or injury to persons arising from the construction of the Works. His attention is also drawn to the General Conditions of Contract regarding insurance to be effected by the Contractor. Special attention is drawn to the exclusions in this insurance policy and particularly to the exclusions regarding consequential damage.

PSA 5.4.5 Access to Services

The Contractor shall allow all reasonable access to any Authority for the purpose of repairing, maintaining, laying and/or relaying any service, cables or mains during the period of this Contract.

The Contractor shall co-operate with other Contractors or Authorities responsible for the installation of water reticulation, electricity cables and communication cables and shall arrange his programme accordingly.

PSA 5.4.6 Public relations

Prior to the commencement of the works, the Contractor shall on Council's letterhead at his own expense and with all relevant contact numbers, compile and distribute explanatory letters typed in English, Afrikaans and where necessary in Xhosa to each address likely to be affected by the works. These letters are to be vetted by the Employer's Agent prior to distribution. Complaints from members of the public are to be dealt with in a courteous and expedient manner to the entire satisfaction of the Employer's Agent.

PSA 5.5 Dealing with Water on Works

All water, whether from rain, pipeline failures, or subsurface water and infiltration shall be dealt with in such a way as to ensure the safety of the works.

It is required that adequate preventive measures are taken and maintained to ensure that the works are protected from damage due to water from any source.

The Contractor shall design, construct and maintain all drains and other temporary works necessary for the dewatering and flood protection of the permanent works. All methods of dewatering and flood protection shall be submitted to the Employer's Agent for approval.

In the event of these measures failing to protect the works, action shall be taken immediately to protect the works from further damage, the cost of which shall be carried by the Contractor. The damage caused by the water shall be made good by those responsible for the work damaged, or as directed by the Employer's Agent.

The Contractor shall be responsible for and shall repair at his expense any damage to the foundations, structures or any part of the works caused by floods, water or failure of any part of the dewatering and flood protection works.

Having served their purpose, all temporary works shall be removed, backfilled or levelled such that the operation of the works shall not be affected in any way.

The cost of all flood protection and control of water measures shall be included in the tendered sum for payment in the General Section of the Schedule of Rates.

Where specialist dewatering measures are required for a project and is to be undertaken by a sub-contractor, the cost shall be included for each Works Project and paid for as a separate item.

PSA 5.7 SAFETY

PSA 5.7.1 Occupational Health and Safety Act

The Contractor is to observe the provisions of the Occupational Health and Safety Act 85 of 1993. Working on underground pipelines presents hazardous conditions and the Contractor's attention is drawn to the Occupational Health and Safety Act - General Safety Regulations and in particular Regulation No. 5 – Work in Confined Spaces. The Contractor shall, in terms of the Occupational Health and Safety Act Construction Regulations 2014, address these hazards in his Health and Safety Plan.

In addition, the Contractor shall comply with the Health and Safety Specification in Part C3.5.

The Contractor shall give notice to the Provincial Director, in terms of Clause 3 of the Occupational Health and Safety Act Construction Regulations 2014, prior to the commencement of work on site.

The Contractor must appoint a full time Construction Health & Safety Officer (CSHO) to monitor all works construction sites for compliance.

PSA 5.7.2 Construction hazards

The possibility of dangerous gases being present in pipelines cannot be excluded and the Contractor must therefore ensure adequate ventilation at all times. Generally, a series of open manholes will be sufficient but it may be necessary initially to provide forced ventilation. Approved gas testing equipment and breathing apparatus must be available on site at all times and regular tests are to be made to check for the presence of gases. Unattended open manholes must be protected by at least three traffic cones and the opening is to be covered with an extruded mesh grid or similar.

The possibility of high water pressures to be taken into account when working with live water mains.

Some of the existing pipelines to be repaired and/or rehabilitated are of asbestos cement. Working with asbestos cement can present hazardous conditions and the Asbestos Regulation 2001 shall apply.

The safety of the public and all workers and the provision of all necessary safety equipment for the protection of workmen shall be the Contractor's sole responsibility.

Add the following sub-clauses to clause 5:

PSA 5.9 SITE MEETINGS

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

PSA 5.10 DAYWORK

PSA 5.10.1 Scope

This section covers the evaluation and method of measurement and payment for work, ordered by the Employer's Agent in writing, carried out on a daywork basis, all in accordance with Sub-clause 6.5 of the General Conditions of Contract and Contract Specific Data.

PSA 5.10.2 General Requirements

Work will be classified as daywork only if the Employer's Agent considers no other rate in the schedule of quantities appropriate for payment purposes.

Only work ordered in writing by the Employer's Agent to be executed as daywork shall be measured and paid for at the rates tendered in the Schedule of Quantities.

The Contractor shall keep and submit records of the work performed in accordance with the requirements of sub-clause 6.5 of the General Conditions of Contract or Contract Specific Data.

PSA 5.10.3 Labour

The tendered rates for labour to be included as daywork charges shall include the salaries and wages of gangers or charge hands working with their gangs but shall exclude the costs of the time of the foremen or supervisors which will be deemed to have been included in the sums tendered for the relevant items in the schedule of quantities.

Gross remuneration, as specified in Sub-clause 6.5 of the General Conditions of Contract and Contract Specific Data, will be deemed to include the following:

(a) Basic salary/wage

(b) Overhead charges such as fringe benefits not reflected in basic salary and wages which may include:

- i. normal annual bonus
- ii. Employer's contribution to medical aid
- iii. group life assurance premiums
- iv. Employer's contribution to pension/provident fund
- v. all other costs as per letter of appointment

and costs payable due to statutory requirements, which may include:

- i. Workmen's Compensation Fund contribution
- ii. Unemployment Insurance Fund contributions
- iii. District Council levies or the equivalent thereof

The rates tendered for labour shall include for the actual cost of salaries and wages, all overhead charges, profit, liabilities, obligations, risks and incidentals for all workmen to execute work by dayworks.

PSA 5.10.4 Materials

The nett cost price of materials (exclusive of VAT) actually delivered to the site to be included as daywork charges shall include the costs of delivery to the usual points at which materials are received on the site.

Before ordering any material, the Contractor shall submit quotations to the Employer's Agent for his approval, and shall submit such receipts or vouchers to the Employer's Agent as may be necessary for proving the amount claimed.

The percentage tendered as an on-cost on the net cost price of materials shall include for all handling, overheads, profit, liabilities, obligations, risks, incidentals and other on-costs for the supply, delivery and distribution of material for daywork to the individual site(s) where daywork is in progress.

PSA 5.10.5 Plant

The full inclusive hourly cost of operational plant which is available on site or which has been removed without written authorization of the Employer's Agent, to be included as daywork charges will be taken to be the tendered rate which, in the opinion of the Contractor, will be applicable in all respects to the situation and terms of the contract.

The hourly rate tendered or agreed shall constitute the daywork rate for the plant and will be deemed to include all costs for plant operators, consumable stores, fuel maintenance, depreciation, ground-engaging tools and all other incidentals necessary to operate the plant for the purposes for which it was designed.

Failure on the part of the Contractor to state in the schedule of quantities the plant on which his tender is based, shall be considered as a firm agreement on the part of the Contractor that he waives all rights to distinguish between the different types and capacities of plant falling within the description and/or category given, and the Employer's Agent shall have the right to call upon the Contractor to supply any such plant to the site and perform the work as directed by him at the particular tendered rate.

Sixty percent (60 %) of the hourly rate tendered or agreed will be paid in respect of plant which is being employed for daywork, but standing idle on the specific instructions of the Employer's Agent, as full compensation for idle costs of daywork plant.

For plant not on site, the costs of establishing items of plant on the site for daywork on specific instruction of the Employer's Agent will be negotiated with the Contractor at the time that such daywork is contemplated.

PSA 5.11 Public relations

Prior to the commencement of work, the Contractor shall at his own expense and on his own letter with relevant contact numbers, compile and distribute explanatory letters typed in English, Afrikaans and in Xhosa to each address likely to be affected by the works. These letters are to be vetted by the Employer's Agent and Client prior to distribution. Complaints from members of the public are to be dealt with in a courteous and expedient manner to the entire satisfaction of the Employer's Agent.

PSA 5.12 Interruption of service

The maximum time permitted for consumers to be without water, sewerage or stormwater drainage services is six (6) hours. The use of bypass or temporary connections shall be permitted. Notice must be given to affected residents 24 hours prior to shut down.

The Contractor shall provide a 24-hour standby service for the maintenance and repair of any section of work covered by the works contract. He shall provide the Employer's Agent with an effective means of contacting the standby staff on a 24-hour basis. All repairs necessary to maintain services to residents shall be carried out without delay.

All costs incurred by the Contractor in complying with PSA 5.12 shall be deemed to be included in his rates and no separate payment shall be made in this regard.

PSA 5.13 Environmental Protection

Construction will take place within an urban area and every precaution must be taken to protect the established vegetation and roadside facilities. It is therefore essential that the Employer's Agent be continually consulted throughout the construction period to ensure that environmental considerations are satisfied.

Failure to show adequate consideration for the environmental aspects of this contract will be sufficient for the Employer's Agent to have the Contractor's representative or any other Contractor's employee(s) removed from the site in terms of the General Conditions of Contract.

The following conditions have been imposed and shall be strictly complied with:

- (a) Personnel and plant shall not enter property beyond the boundaries of approved working areas, camp sites and stockpile sites without written authorization by the Employer's Agent irrespective of whether the approved areas are fenced off or not.

- (b) The Contractor shall, to the satisfaction of the Employer's Agent, take every necessary precaution to prevent the contamination and pollution of the environment.

The Contractor shall plan his activities such that materials, in so far as is possible, can be transported direct to and placed at the point where they are to be used. However, where utilising materials in this manner is impracticable, it shall be temporarily stockpiled for later loading and transportation to where it will be used. Compensation for stockpiling materials will not be payable directly, but full compensation therefore shall be included in the rates for the various items of work in which the stockpiled material is used.

Stockpiling areas shall be indicated to and approved by the Employer's Agent. Before any stockpiling of material may be done, the site shall be cleaned, and all loose stones or any plant or other material which may cause pollution shall be removed. After the stockpiled material has been removed, the site shall be reinstated as closely as possible to its original condition.

- (c) The Contractor shall be responsible for the establishment of a refuse control system for the collection and removal of refuse from the camp site and working areas.

The Contractor shall ensure that waste and surplus food, food packaging plastic and organic waste is not deposited by his employees anywhere on the site except in refuse bins for removal. If his employees are to eat elsewhere on site and not within the camp site, the Contractor shall designate restricted places for eating in his working areas, shall provide adequate refuse containers in all these places and shall remove the refuse and clean up any remaining food containers immediately after mealtimes.

- (d) Trees, shrubs or any other existing vegetation on the site may not be removed without approval of the Employer's Agent. Such trees, shrubs or any other vegetation shall remain the property of the employer.

- (e) No bituminous material or waste material shall be dumped, even if only as a temporary measure, on the site, but provision shall be made to remove such excess material directly off the site of works

- (f) The Contractor shall ensure adequate provision of latrine facilities for his employees.

All costs incurred by the Contractor in complying with PSA 5.13 shall be deemed to be included in the Contractor's general obligations and no separate payment shall be made in this regard.

PSA 5.14 Supervision

All work to be carried in the Works Projects shall be supervised throughout the duration of the contract by a qualified senior representative of the Contractor who has extensive experience in the type of work to be executed. The representative must be authorized to make all necessary decisions on behalf of the Contractor.

PSA 7 TESTING

PSA 7.1 PRINCIPLES

PSA 7.1.1 Checking

Every completed layer or section of the Works shall be subject to check testing by the Contractor, at his own cost. Once the Contractor has satisfied himself with the standard of his works, he shall provide the Employer's Agent with the results of his check testing indicating that the work is to specification. In order to minimize delays due to testing, the Contractor shall give the Employer's Agent at least 24 hours' notice of when any portion of the works will be completed to his satisfaction so that the Employer's Agent can arrange for his acceptance control testing to be done.

Failure by the Contractor to notify the Employer's Agent or to provide the required information or, where specified, to perform the required test, will be grounds to exempt the Employer from payment for the associated work and for all subsequent work which would be affected by the failure of the work to be tested.

The Employer's Agent will be under no obligation to the Contractor to perform acceptance tests. If the Employer's Agent elects not to perform a particular test after notification by the Contractor, he will issue the Contractor with a written instruction to proceed with the relevant works without the acceptance test being performed.

Nothing contained in this Clause will relieve the Contractor of his responsibilities under the specification or in any way limit the tests which the Employer's Agent may call for or perform in terms of the specification.

PSA 7.1.2 Standard of Finished Work not to Specification

In addition to the provisions of Subclause 7.1.2, the costs of check testing by the Employer's Agent including tests carried out by commercial laboratories after remedial work by the Contractor shall be borne by the Contractor.

PSA 7.2 Approved Laboratories

Replace the contents of sub-clause 7.2 with the following:

"Unless otherwise specified in the relevant specification or elsewhere in the Project Specification, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Employer's Agent of the quality of materials used and/or workmanship achieved, may be carried out:

- (a) Any testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;
- (b) Any testing laboratory owned, managed or operated by the Employer or the Employer's Agent
- (c) Any testing laboratory established and operated on the Site by or on behalf of the Employer or the Employer's Agent.
- (d) Any other laboratory that the Employer's Agent approves in his absolute discretion."

The cost of such test which meets the specification requirements will be reimbursed to the Contractor in monthly payment certificates.

A Provisional Sum has been provided in the Schedule of Quantities to allow for the cost of such testing.

The Contractor shall make due allowance for testing procedures in his construction programme.

PSA 7.6 As-built Information

As the works are progressing, the Contractor shall mark on a separate set of drawings, after checking the information, all "As-Built" details and submit them to the Employer's Agent's Representative for approval on a weekly basis.

Where services have been disturbed, all services shall be surveyed, ends of all ducts or banks of ducts, all pipe bends and the cover and invert levels of all manholes and catchpits shall be surveyed prior to being backfilled.

The Contractor shall supply this co-ordinate and level information in electronic format, with the marked-up drawings at the completion of the contract. This information will be required in both hard copy and in electronic format. The format of as-built electronic information shall be obtained from the Employer's Agent. No separate payment for this work shall be made in the Schedule of Rates. It shall be deemed to be included in the Contractor's General Obligations.

Refer to the annexure in C3.6 Annexes, Langeberg Municipality "**Protocols Regarding Civil As-Built Plans and GIS Data**" for the format of submission of all as-built information. The information required and its format that is acceptable by the Langeberg Municipality, is acceptable by the Langeberg Municipality.

The Certificate of Completion shall only be issued once the required information has been submitted and approved.

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.2.2 PAYMENT – Time-related Items

Delete the second sentence and replace with the following:

"Subject to the provisions of 8.2.3 and 8.2.4, the tendered sum per day shall be multiplied by the number of days required to complete the site activities from the commencement date of the contract until the end of the period for completion of the works."

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS

PSA 8.3.1 Contractual Requirements

Add the following items:

PSA 8.3.1.1 Security (Provision of Performance Guarantee)

Unit: Sum

The unit of measurement shall be for the entire contract period and payment thereof will be made after commencement of the first Works Package contract.

The tendered rate shall include for all costs involved to comply with the requirements as stipulated.

PSA 8.3.1.2 Insurance (Blanket Policy)

Unit: Sum

The unit of measurement shall be one year and payment thereof will be made at the beginning of each year of the contract respectively, subject to an active appointed Works Package contract.

The tendered rate shall include for all costs involved to comply with the requirements as stipulated.

PSA 8.3.2.2 Location of Facilities for Contractor

The pay item for the facilities for the Contractor are for any location within the Langeberg Municipal Boundaries

PSA 8.4 SCHEDULED TIME-RELATED ITEMS

Wherever the words "The sum" occurs in Subclause 8.4 replace with the words "The sum per day".

Wherever the Unit "Sum" occurs in Subclause 8.4 replace with the Unit "day".

PSA 8.4.1 Contractual Requirements

Unit: day

The unit of measurement shall be for the entire contract period, starting with the approved commencement of works, and payment shall be measured and paid in interim payment certificates.

The sum per day shall cover all the Contractor's time-related costs of providing surety, insurance of the Works and plant, third party or public liability insurance and unemployment insurance to cover his compliance with the requirements of the Workmen's Compensation Act, 1941 (Act No. 30 of 1941) and such items as contributions to the CEITB.

PSA 8.4.2.2 Facilities for the Contractor

The sums tendered for in Items 8.3.2.2 and 8.4.2.2 for the Contractor's fixed and time related charges shall include for all the requirements described.

Contractor's Fixed Charges: The camp site will only be established if warranted. It is envisaged that the Contractor will not establish a camp site for every Works project but that he will provide services such as Water and Sanitation for his staff.

Should the Contractor submit a claim for provision of Water and Sanitation for his staff, he must provide all evidence of expenses in this regard. No other payment shall be made in this regard.

The Contractor shall establish his camp at a location approved by the Employer's Agents Representative. The Contractor shall make his own arrangements concerning the provision of water, electricity and other services for his own office.

The Contractor shall submit to the Employer's Agents Representative his proposed siting and layout of all camps, stores, offices etc. within seven (7) days after acceptance of his tender. Proposals for disposal sites for sewage, waste and refuse shall be submitted to the Employer's Agents Representative for approval.

Should the Contractor wish to use any areas outside the site as defined above, he shall negotiate for the use of and rent for, such additional areas, with the affected landowners. Any damage to or desecration of land outside the site shall be made good to the satisfaction of the landowner and the Employer's Agent's Representative at the Contractor's expense.

The Contractor shall be reimbursed for any costs incurred relating to the leasing of public open spaces from the municipality for site establishment purposes. The Employer's Agents Representative will approve payment thereof once all supporting documentation, such as invoices, has been submitted.

PS A 8.6 PRIME COST ITEMS
Substitute A 8.6 with following:

PS A 8.6 PRIME COST SUMS

- a) Description of Items to which Prime Sums Applies Unit : Prov Sum
- b) Charges required by Contractor on Item (a) above Unit : %

Subitems (a) and (b) will be provided in the Schedule of Quantities for each different item to which a Prime Cost Sum applies.

The Contractor shall be reimbursed under subitem(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services supplied, but excluding any charges for the Contractors labour, profit , carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under subitem (b), the respective percentage, as stated by the Contractor in his tender, of the amount certified by the Engineer for payment under the related subitem (a). The percentages tendered by the Contractor for each respective subitem (b) included in the Schedule of Quantities shall be deemed to be in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related subitem (a).

If the Contractor shall have omitted within his tender to insert a tendered percentage under subitem (b), or tendered a zero percentage, the Contractors tendered rate for subitem (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under subitem (b).

Note in correction with additional tests required by the Engineer:

When a PC sum is included in the Schedule of Quantities for additional tests required by the Engineer, the Contractor shall be responsible for both the costs of normal testing as described in the Project Specifications and for the cost of any additional test that indicates that the specifications have not been complied with."

Where work is to be done by a sub-contractor, such as DFA and/or Telkom, the Contractor is to take cognisance of the works to be completed and must ensure that the Date of Practical Completion and/or Due Completion date is not delayed. Should the Contractor fail to programme of the said works, any delay will be for the Contractors account. The Contractor must liaise with the relevant authority (DFA: Mr Paul Roos – 082 658 5695 & Telkom: Mr. Eben de Koker 081 406 1007) and Clause 2.1 of the GCC 2015 (3rd Edition) applies in this regard. This work must therefore be effectively programmed for each section of the works to be completed by the sub-contractor and Clause 4.4 of the GCC 2015 (3rd Edition) shall apply in this regard. All costs pertaining to this is deemed to be included in the overhead costs (of the rates tendered).

The amounts specified in the bill of quantities are provisional and preliminary amounts and may be reduced and/or removed completely at the discretion of the Employer.

PSA 8.7 Daywork

- (a) Labour charges
- | | | |
|------|---|----------------|
| (i) | (description of employee/designation/skill indicated) | Unit: hour (h) |
| (ii) | (etc, for other designations/skills) | Unit: hour (h) |

The unit of measurement shall be the hour of time worked by the particular employee on the designated work on instruction by the Employer's Agent.

The daywork rates submitted for labour in the schedule of quantities shall be the cost of labour for each skill level and shall apply only to the number of workers approved in writing by the Employer's Agent.

The rates shall be for normal working hours and shall be increased pro rata for overtime at the standard rate applicable if the work performed outside working hours is approved in writing by the Employer's Agent.

The tendered rates shall include full compensation for all costs for salaries and wages, use and maintenance of tools and equipment, holidays with pay and financial charges of any description incurred by the Contractor and his subcontractors as well as for all insurance, accommodation,

travelling, travelling time, supervision, overheads, profit, obligations, risks and any other emoluments and incidentals necessary for labour to execute work as daywork.

(b) Material charges

(i)	Actual cost of material (excluding VAT)	Unit: Provisional Sum
(ii)	Handling cost in respect of subitem (b)(i)	Percentage (%)

Expenditure under this item shall be made in accordance with Clause 6.5 of the General Conditions of Contract. The provisional sum allowed shall include for the actual cost incurred for materials used in authorised daywork. The actual costs for materials shall not be subject to contract price adjustment.

The tendered percentage is a percentage of the amount actually spent under subitem (b)(i) and shall include full compensation for the handling costs of the Contractor, profit, overheads and incidentals in connection with materials used for daywork on the instructions of the Employer's Agent.

Payment for expenditure under this item will be made in full as and when the money is expended subject to written proof by the Contractor of payment of invoiced amounts.

(c) Plant charges

(i)	(description of plant indicated)	Unit: hour (h)
(ii)	(etc for other plant)	Unit: hour (h)

The unit of measurement shall be the hour actually worked by each item of plant (vehicle, machine or equipment) on the designated work on instruction by the Employer's Agent.

The Contractor and the Employer's Agent will agree on the method of recording the working hours prior to the commencement of work. Any long period of idling at any one time which in the opinion of the Employer's Agent is beyond that required for normal operating conditions will not be paid for as working time. Non-working hours for any reason shall not be measured for payment.

The tendered rates include full compensation for furnishing and using the plant, including the cost of plant operators, consumable stores, fuel, ground-engaging tools, maintenance and for all other incidentals necessary to execute the authorised daywork as specified.

Where there is ambiguity between the power developed at the flywheel and mass of machine, the power shall govern the measurement category.

(d) Other plant not specified above

Unit: Provisional Sum

The provisional sum provided to cover the cost of other plant shall be expended in accordance with Clause 6.5 of the General Conditions of Contract.

PSA 8.8 TEMPORARY WORKS

PSA 8.8.2 Dealing with traffic

Add the following:

Work relating to dealing with traffic (or accommodation of traffic) is to be carried out in accordance with Accommodation of Traffic included in the Particular and Generic Specifications section. No separate measurement and payments for dealing with traffic is done in the Accommodation of Traffic Section. Payment will be included under Item E.15.01 (PSA 5.2.4).

Replace item 8.8.3 with the following:

PSA 8.8.3 Watching, lighting and temporary fencing

This item will be all inclusive of the following:

a) Establishment

Unit: Sum

b) Maintenance Cost:

Security:

Unit: Day

This item shall include for provision of security services and any other security measures which the Contractor may wish to employ during the contract as specified in PSA 5.2.1.

Temporary fencing of excavations:

Unit: m/day

This shall include for supplying all delineators, poles and warning tape and fencing where required, providing all labour necessary for the operation, supervising the work, interim removal and re-erection and any other incidentals necessary to satisfactorily complete construction.

Lighting:

Unit: Day

This shall include for supplying all the lighting units, chains, padlocks and poles, providing all labour necessary for the operation, all maintenance of the lighting system, supplying all cables and electrical power as required, supervising the work, the interim removal and re-erection of the lighting units, and any other incidentals necessary from the satisfactory operation of the lighting.

Replace item 8.8.4 with the following:

PSA 8.8.4 LOCATION AND PROTECTION OF EXISTING SERVICES

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

PSA 8.8.4.1 Provision of Devices for:

- | | |
|---------------------------------|-----------|
| (a) Water and sewer pipes | Unit: Sum |
| (b) Electrical and other cables | Unit: Sum |
| (c) Other | Unit: Sum |

The tendered sums shall cover the cost of providing and operating suitable equipment for as long as is necessary in order to locate all existing services likely to be affected by the construction activities. Alternatively, an approved specialist firm may be employed to carry out the work.

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

- | | |
|------------------------|----------------------|
| (a) In all roadways | Unit: m ³ |
| (b) In paved areas | Unit: m ³ |
| (c) In concrete areas | Unit: m ³ |
| (d) In all other areas | Unit: m ³ |

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

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

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

Add the following item:

PSA 8.8.7 Dealing with water:

- | | |
|------------------------------------|-----------|
| (a) Dealing with subsurface water | Unit: Sum |
| (b) Dealing with surface water | Unit: Sum |
| (c) Extra-over for item (a) above: | |
| i) Installation of well points | Unit: m |
| ii) Operate and maintain | Unit: day |

The sum shall cover the cost for the provision, operation, maintaining and removal of all plant and materials required to deal with any water anywhere on the Site as required in terms of Sub-clause

5.1.3 of SANS 1200 D and Sub-clause 5.1.2 of SANS 1200 DB. No additional payment will be made for "Special water hazards".

The sum shall cover the cost of providing the necessary plant or materials, or both, fully erected and operative on the Site, the cost of operating and maintaining pumps, well points, sheeting, close timbering, and other equipment, as applicable, for 24 hours a day, 7 days a week, throughout the period during which the facilities are required, and the cost of removing such goods and restoring the Site to its original condition on completion of that part of the project for which the temporary works were erected.

Add the following item:

PSA 8.8.8 Liaison with Services Authorities

Unit: Sum

The tendered sum shall include full compensation for liaising and interacting with all the relevant Service Authorities per Works Project, for obtaining the necessary wayleaves for services affected by the Works, allowing them onto the site and accommodating them for any service protection, relocation or supervision which may be required.

The Contractor shall at all times abide by any conditions imposed by such wayleaves permissions or permits. The Contractor shall ensure that all wayleaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand. The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

Application for use of a Public Open Space for site camp is covered by a Provisional Sum. Rental of the site is also covered by a Provisional Sum.

Add the following item:

PSA 8.8.9 Notices to consumers/residents

Notices to consumers and residents regarding work and disruptions to service. (per 30 notices)

Unit: Sum

This pay item is measured and paid as a sum per 30 notices. (it is based on 30 notices per 100 m of pipeline).

The tendered sum shall include full compensation for liaising with the Employer, drafting the notice, printing and delivery to the affected residents/consumers.

Add the following items:

PSA 8.9 HEALTH AND SAFETY

PSA 8.9.1 Complying with Health and Safety requirements

Unit: Sum

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2014 and OHS Specification, the Professional Indemnity (PI) insurance and other statutory requirements) at all times for the full duration of the Contract, excluding pay items specified in PSA 8.9.1 above.

The following pay items are specified in Annexure F Guidelines of the Health and Safety Specification in Part C3.5.

Preparation of H&S Documentation

Preparation of principal contractor's site specific health and safety plan, safety file, risk assessments, fall prevention/protection plan, Annexure 2 notification to Dept of Labour, demolition method statement, other method statements requested to be prepared for safety reasons, permits, amendments to safety plan during course of project, traffic management / accommodation plans, and any other legally required health and safety documentation.

Preparation of Work Permit

Provision of safety documentation required of the principal contractor for Construction Work Permit application by the safety agent of Dept of Labour, if applicable (note section 2.4 of the Health and Safety Specification).

Workmen's Compensation Cover

Provision of current workman's compensation cover for employees for the project, and ensuring that contractors appointed have such cover too.

H&S Management of Personnel

Health and safety management of principal contractor's employees, visitors, and contractors' employees on site.

Construction Management

Provision of full time Construction Manager for site, provision of Alternate Construction Manager in absence of Construction Manager and provision of sufficient safety supervision on site.

Full-Time Construction H&S Officer

Provision of full time SACPCMP registered Construction Health & Safety Officer for site and preparation of safety reports after each safety inspection.

Appointee selection and training

Competence assessment, appointment and required competence and safety training of all principal contractor's legally required appointments for site.

Plant and Equipment Maintenance

Maintenance of principal contractor's plant and equipment on site so as to be in safe condition, including inspection registers, inspections by competent persons, thorough examination certificates, hand over certificates and related documentation.

General Safety Signage

Provision of general safety signage (e.g. first aid, firefighting, traffic safety, excavations, PPE, Assembly Point, noise zones, etc.)

Employee Medical Certificates

Provision of medical certificates of fitness for employees on site (Annexure 3 of Regulations)

Employee Personal Protective Equipment (PPE)

Provision of personal protective equipment (PPE) by principal contractor to employees and, as applicable, visitors to site, incl.

- reflective vests
- hard hats
- protective foot wear
- hearing protection
- respiratory protection
- safety eyewear
- gloves
- overalls
- Safety harnesses and lanyards
- Sunblock
- UV Protective clothing / hats / eye wear
- Protective thermal wear (heat / wind / cold / rain)
- Protective firefighting clothing
- Arc flash and electrical protective clothing

Fall Prevention Equipment

Provision of Fall Prevention and Protection Equipment including.

- Rope
- Lifelines & Self-Retracting Lifelines (SRL)
- Anchor Points
- Warning Lines & Area demarcation
- Fall Arrest Accessories
- Fall Rescue Equipment
- Passive Fall Protection Equipment
- Confined Space Rescue and Retrieval (In elevated work situations)
- Etc.

Confined Space Work Equipment

Provision of Confined Space work equipment & Training

- Training
- Air Monitoring Equipment
- Ventilation Equipment
- Entry Equipment
- Personal Protective Equipment
- Confined Space Rescue and Retrieval Equipment
- Communication Equipment
- Etc.

Monthly Safety Meetings

Holding of safety meetings with safety representatives and safety officers on site on at least monthly basis.

Management Safety Meetings

Principal contractor construction safety management attendance at health and safety meetings called by client, professional team or safety agent.

H&S Induction Training

Provision of site specific health and safety induction training for all on site.

Toolbox Talks

Conducting of toolbox talks to employees on health and safety issues on a weekly basis.

First Aiders

Provision of sufficient First Aiders for site as per legal requirements.

First Aid Boxes

Provision of First Aid Boxes for site as per legal requirements.

First Extinguishing Equipment

Provision of sufficient fire extinguishing equipment for site.

Fire Drills

Fire drills on site at least 6 monthly basis for duration of project.

Welfare Facilities

Provision of welfare facilities for site (drinking water, toilets, soap, means of drying hands, toilets paper, sheltered eating areas, etc.).

Housekeeping

Provision for safe disposal of waste, spill kits, safe housekeeping and storage practices.

Edge Protection

Provision of leading edge protection, covers to prevent falls.

Fencing

Provision of fencing at site camp and to protect excavations.

COVID-19 Measures

COVID 19 measures – provision of hand sanitiser, respiratory protection (as required), safety signage, formal and informal communication to all on site and any other measures necessary to contain and detect COVID 19 on site (refer to safety specification).

Safety File Handover

Compilation of consolidated Safety File at Close Out stage and handover of file to safety agent in hard copy or digital format.

Reinforcement Safety Caps

Supply of safety caps on all exposed re-bar.

PSA 8.9.2 Asbestos Specialist Services:

- (a) Approved Asbestos Inspection Authority (AIA) to assist the Contractor with the approval of the asbestos plan of work, in accordance with legislation Asbestos Regulations 2001
Unit: Sum
- (b) Administrative cost and profit in respect of above item (a)
Unit: %
- (c) Handling and disposal of asbestos containing waste from site to the permitted Vissershok Landfill site, in accordance with legislation
Unit: Sum
- (d) Transport of asbestos-containing waste to the licensed privately owned operated hazardous waste disposal facilities (rated H:h) at Vissershok for waste with classification ratings of 1 (extreme risk), in accordance with Asbestos Regulation.
Unit: ton/km
- (e) Cost of dumping at privately owned, permitted Vissershok landfill site (Original tipping slips are required for audit purposes)
Unit: ton

Payment for this item shall include all the statutory requirements and recordkeeping as stated in Section 9 and 16 of the Asbestos Regulation GNR.155

PSA 8.10 Complying with Environmental Management requirements

Unit: day

The amount tendered for this item shall allow for full compensation for all costs, of whatever nature, for adhering to the Environmental Management Plan, including provision of the ECO Officer, as set out in C3.1 Description of works, sub-clause 3.1.5.13 and C3.5 Management, Particular Specification E of this document.

PSA 8.11 Noise Exemption Permit

Unit: Sum

The tendered rate must include all costs incurred for obtaining a Noise Exemption Permit for each "Works Project" prior to construction. This permit is required for all works, including CCTV.

PSA 8.12 Contract Nameboards

Unit: Sum

The amount tendered for this item shall allow for full compensation for all costs incurred in procuring and erecting contract name boards as shown on the drawings and at the positions indicated by the Engineer on site and for removing the boards at the end of the contract.

PSC SITE CLEARANCE

PSC 1 SCOPE

The site is situated in a developed urban environment. The contract will require the demolition and removal or storage of existing materials on the site prior to commencement of the works.

PSC 3 MATERIALS

PSC 3 .1 Disposal of Material

No material shall be spoiled on the site. The Contractor shall make his own arrangements for the provision of a suitable spoil area off the site.

The Contractor will be held solely responsible for observing the by-laws and regulations of the relevant local authorities with regard to fire and for any injury to persons and damage to property. The Contractor shall indemnify the Employer against all claims for damages arising from this source.

PSC 5 CONSTRUCTION

PSC 5.1 Areas to be cleared and grubbed

Add the following items:

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

Add the following items:

"The following applies to clearing widths:

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

PSC 5.2 Cutting of trees

PSC 5.2.3 Preservation of trees

PSC 5.2.3.2 Individual trees

Replace the last sentence with the following:

"An amount of **R10 000.00** will be deducted from moneys due to the Contractor as a penalty for every tree that is damaged or removed unnecessarily."

PSC 5.3 Removal and storage of Kerbing, Channelling, Edging, Paving and Grassing

Where indicated by the Employer's Agent, the Contractor shall remove existing kerbing, channelling, edging, brick, paving, grass and lawns, etc. and store all such material for re-use and reinstatement on the site of the works.

Where existing kerbs are to be removed and the existing channels are to remain, the Contractor shall carefully remove the kerbs without disturbing the channels. Any channels which are disturbed or damaged during this operation shall be replaced at the Contractor's expense.

PSC 5.5 RECLEARING OF VEGETATION

Add the following items:

"When areas have to be re-cleared on the written instructions of the Employer's Agent, such re-clearing shall be carried out at the Contractor's own cost and the Contractor is therefore advised not to clear the areas too soon."

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.1 BASIC PRINCIPLES

Add the following:

"The thickness of the layer that will unavoidably be stripped during clearing of vegetation will be taken as 150 mm. This implies that levels used in earthworks quantity calculations will be 150 mm lower than the original levels."

PSC 8.2 PAYMENT

PSC 8.2.1 Clear and grub

Replace the first line with the following:

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

PSC 8.2.7 Dismantle and remove

Also applies to underground structure

Replace the second paragraph with the following:

"The tendered rates shall include full compensation for the detection, disconnection, removal, disposal, including all necessary excavation and backfilling.

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

a) Pipelines

- i) Up to 150 mm diameter
- ii) Over 150 mm diameter

Unit: m
Unit: m

The rate shall cover the cost of the dismantling, removal and disposal of existing pipe to a site provided by Contractor.

b) Sewer structures Manholes (brick, fibre cement or concrete)

Unit: No

The rate shall cover the cost of the demolishing, removal and disposal of existing fibre cement or concrete manholes to a site provided by Contractor.

c) Watermain structures Valve or hydrant chambers (brick, fibre cement or concrete)

Unit: No

The rate shall cover the cost of the demolishing, removal and disposal of existing chambers to a site provided by Contractor.

d) Kerbs, edging and channels

Unit: m

The rate shall cover the cost of the removal and disposal of existing kerbs, including all necessary excavation to site provided by Contractor.

e) Asphalt

- i) 0mm to 50 mm thick
- ii) Over 50 mm thick

Unit: m
Unit: m

The rate shall cover the cost of the removal and disposal of existing asphalt sidewalks to a site provided by Contractor.

f) Road signs

Unit: No

The rate shall cover the cost of the removal and disposal of existing road signs to a site provided by Contractor.

g) Trees and Plants / Shrubs

Unit: No

The rate shall cover the cost of the removal and disposal of existing small trees and plants/ shrubs to a site provided by Contractor.

h) Grass and lawns

Unit: m²

The rate shall cover the cost of the removal and disposal of existing grass and lawns to a site provided by Contractor.

i) Concrete in roads, driveways or walkways

- | | |
|---|----------------------|
| i) Up to 100 mm thick concrete | Unit: m ² |
| ii) Over 100 mm and up to 200 mm thick concrete | Unit: m ² |
| iii) Over 200 mm thick concrete | Unit: m ² |

The rate shall cover the cost of the cut, removal and disposal of existing concrete roads, driveways or walkways to a site provided by Contractor.

j) Brick Paving in roads, driveways or walkways Unit: m²

The rate shall cover the cost of the removal and disposal of existing brick paved roads driveways or walkways to a site provided by Contractor.

PSC 8.2.10 Remove topsoil to a nominal depth of 150 mm, stockpile and reinstate..... Unit: m³

The tendered rate shall include full compensation for removing topsoil to a depth of 150 mm, temporary storing of material, transporting and reinstating.

Add the following item in subclause 8.2:

PSC 8.2.11 Remove and stockpile material for later reinstatement

a) Kerbs, edging and channels Unit: m

The tendered rates shall include full compensation for the careful removal of kerbs or edging, the temporary stockpiling and cleaning thereof and the reinstatement once the work has been completed, including all necessary excavation, backfilling and concrete bedding and backing with 15 MPa concrete. In the event of the Contractor damaging any of the kerbs, he will replace it at his own cost.

b) Brick paved / Interlocking Bricks in roads, driveways or walkways Unit: m²

The rate shall include full compensation for the careful removal of bricks/ pavers, the temporary storing and cleaning thereof and the reinstatement once the work has been completed, including all necessary excavation, backfilling and backing with 25 MPa concrete. In the event of the contractor damaging any of the bricks/ pavers, he will replace at his own cost.

c) Grass and lawns Unit: m²

The rate tendered shall include for carefully dismantling, loading, taking to storage, keeping grass sods moist, transporting again to area of reinstatement and including for all labour, plant and tools needed to complete the work.

d) Trees and Plants / Shrubs Unit: No

The rate tendered shall include for carefully dismantling, loading, taking to storage, keeping the plants moist, transporting again to area of reinstatement and including for all labour, plant and tools needed to complete the work.

e) Road signs Unit: No

The tendered rate shall include full compensation for the careful removal of road signs, including for both single and double pole road signs, the temporary storing and cleaning thereof and the reinstatement once the work has been completed, including all necessary excavation, backfilling and backing with 25 MPa concrete. In the event of the Contractor damaging any of the road signs, he will replace it at his own cost.

f) Fence

- | | |
|-------------------------------|---------|
| i) All wire type fencing | Unit: m |
| ii) All palisade type fencing | Unit: m |
| iii) Vibracrete walls | Unit: m |

The rate shall cover the cost of taking down the vibracrete walls and fences (palisade and wire type), coiling wire, sorting and stacking all material at sites indicated by the Employer's Agent. The rate shall cover the cost of loading, transporting, offloading all material and installation of vibracrete walls and

fences to previous position and condition. Any materials damaged by the Contractor must be replaced by the Contractor.

PSC 8.2.12 Saw cutting of existing surfaces

Unit: m

This will only apply when existing asphalt, concrete, paving and other hard surfaces was cut for removal and the edge of surface not to be excavated was damaged and needs to be replaced. The tendered rate shall include full compensation for neatly saw cutting the existing asphalt, concrete, paving and other hard surfaces.

PSC 8.2.13 Overhaul

No payment shall be made for overhaul. All haulage shall be considered freehaul.

PSDB EARTHWORKS (PIPE TRENCHES)

PSDB 3 MATERIALS

PSDB 3.1 Classes of Excavation

Notwithstanding the provisions of Sub-clause 3.1 of SANS 1200 DB, the materials excavated other than hard rock will not be classified for the purposes of measurement and payment. The rate for excavation shall cover excavation in all materials other than hard rock (as specified in SANS 1200 DA sub-clause 3.1.2. (c))

PSDB 3.6 MATERIALS FOR REINSTATEMENT OF ROADS AND PAVED AREAS

PSDB 3.6.1 Subbase and Base

Base: Existing road layers shall be reinstated with type G4 base (with crushed stone compacted to 98% Modified AASHTO density) 150 mm thick after compaction

The base layer shall be benched so that the layer overlaps the underlying subbase layer by at least 150 mm on either side of the trench excavation.

Subbase: Existing road layers shall be reinstated with type G5 subbase (with crushed stone compacted to 95% Modified AASHTO density) 150 mm thick after compaction.

The subbase layer shall be benched so that the layer overlaps the underlying selected layer/ insitu by at least 150 mm on either side of the trench excavation.

PSDB 3.6.2 Gravel

Gravel material shall be a natural gravel subbase especially for reinstatement of shoulders compacted to 95% Modified AASHTO density with CBR>45 and a maximum Plasticity Index (PI) of 10.

PSDB 3.6.4 Asphalt Surfacing

The surfacing shall consist of a medium continuously graded asphalt surfacing – CCC Medium or COLTO Medium. The edges of the surfacing / seal shall overlap the base by at least 150 mm on both sides of the trench excavation. The joints must be seal with a Viaseal. A tack coat shall be applied to the finished surface of the base course layer. **A Paver shall be used to lay the asphalt (Asphalt shall not be laid by hand).**

PSDB 4 PLANT

PSDB 4.2 Control of Water

It can be expected that the existing pipelines may be located below the water table. These conditions will necessitate that the Contractor will have to adopt appropriate techniques as set out in subclause 4.2 to control the water. The Contractor's attention is drawn to subclause 5.1.2 in connection with the control of water.

PSDB 5 CONSTRUCTION

PSDB 5.1 PRECAUTIONS

PSDB 5.1.1 General

Trench excavation for new pipelines will be generally by machine after existing services have been exposed by hand.

Trench excavation for pipe repairs will be generally by hand after existing services have been exposed.

The trench excavation shall be such that the base width includes sufficient working space.

The existing pipeline may be corroded or damaged and excavation in close proximity to it will have to be performed with care to avoiding collapsing the pipe. The excavation around the existing pipe from 0.5 m above its crown shall be by hand.

PSDB 5.1.2 Stormwater, Seepage and Dewatering of Excavations

In addition to the Contractor's responsibilities for dealing with water, the Employer's Agent may order the Contractor to place a crushed stone bedding layer (minimum thickness 150 mm) on the trench bottom.

Prior to the provision of the stone layer, Grade 3 geofabric filter material of minimum mass of 150 g/m², must be installed on the trench bottom. After the placement of the stone bedding, the geofabric filter material shall be folded over the stone with a minimum overlap of 300 mm to form an enclosed drain. The specified bedding material shall then be used to bed the pipe.

The Contractor will only be paid for providing and laying the stone bedding layer and the geofabric filter material after receipt of a written order to do so from the Employer's Agent.

Add the following items:

PSDB 5.1.5 Protection of Existing Services

The Contractor shall exercise all the necessary care to prevent damage to known services during construction operations. Major excavating equipment and other plant shall not be operated in dangerously close proximity to these services. Where necessary, excavation in close proximity to these services shall be carefully carried out by means of suitable hand tools, excluding picks wherever their use could cause damage to the services. No additional payment will apply to such more difficult work.

Services left exposed shall be suitably protected from damage and/or theft.

PSDB 5.1.6 Liability for Damage and Insurance

The Contractor's attention is drawn to the relevant clauses of the General Conditions of Contract and Contract Specific Data regarding liability for damage to the Works, or property, or injury to persons arising from the construction of the Works. His attention is also drawn to the General Conditions of Contract regarding insurance to be effected by the Contractor. Special attention is drawn to the exclusions in this insurance policy and particularly to the exclusions regarding consequential damage.

PSDB 5.1.7 Alterations and Repairs to Existing Services

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

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

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

PSDB 5.1.8 Access to Services

The Contractor shall allow all reasonable access to any Authority for the purpose of maintaining, laying and/or relaying any service, cables or mains during the period of this Contract.

The Contractor shall co-operate with other Contractors or Authorities responsible for the installation of water reticulation, electricity cables and telephone cables and shall arrange his programme accordingly.

PSDB 5.3 Site Clearance

Delete the first sentence and replace with the following:

"The Contractor shall clear an area along the pipe route as designated by the Employer's Agent."

PSDB 5.4 Excavation

All excavated material shall be placed in such a way and in such positions as not to endanger or interfere with the works, pedestrians, traffic or property and the Employer's Agent may order the Contractor to remove any material that is considered liable to endanger or interfere with the works, pedestrians, property or traffic and to place such material in another position as indicated by the Employer's Agent.

Add the following:

PSDB 5.4.1 Shoring of Pipe Trenches

The Contractor shall take full responsibility for the safety of excavation, and shall carry out all measures necessary to make secure, by timbering and strutting or sheet piling, the excavated face. All timbering and strutting must be of sufficient strength and capable of being removed readily as the work proceeds.

The Contractor shall further take all precautions to safeguard existing services and structures next or next to excavations carried out by him and shall provide and erect any shoring or underpinning that may be necessary.

The timbering, strutting and sheet piling of the pipe trenches shall not relieve the Contractor of any responsibility and all claims for the compensation for damages or injury caused or aggregated by the Contractor not taking all precautions to safeguard persons or property, shall be met entirely by the Contractor.

PSDB 5.5 Trench Bottom

Where waterlogged trench bottom conditions exist after the Contractor has, in the Employer's Agent's opinion, carried out all possible dewatering operations, the Employer's Agent may order that unsuitable material be excavated and replaced with crushed stone. A layer of 19 mm crushed stone shall be placed over the full width of the trench bottom, in increments of 200 mm thick or such other thickness as may be ordered by the Employer's Agent. The crushed stone shall be placed and rammed into the trench bottom to create a firm platform and shall be finished off to the required trench formation level.

As an alternative, the Employer's Agent may order that a suitable selected fill material, obtained from the site, be placed in the trench bottom to the same dimensions as specified for the crushed stone. The selected fill material shall be compacted to the specified density for trench bottoms.

Where the Contractor's method of working results in quagmire conditions in the trench bottom, the Contractor shall excavate and stabilize the trench at his own cost.

PSDB 5.6 BACKFILLING

PSDB 5.6.3 Disposal of Soft Excavation Material

Surplus excavated material shall be taken off the Site and disposed of at a site arranged by the Contractor, and approved by the Employer's Agent. No payment for overhaul will be made.

PSDB 5.6.4 Disposal of Intermediate and Hard Rock Material

Surplus excavated material shall be taken off the Site and disposed of at a site arranged by the Contractor, and approved by the Employer's Agent. No payment for overhaul will be made.

PSDB 5.7 COMPACTION

PSDB 5.7.1 Areas Not Subject to Traffic Loads

Add the following sentence:

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

PSDB 5.7.2 Areas Subject to Traffic Loads

All trenches backfilled under this contract shall be backfilled with a suitable material (G7 or better) or sand, where instructed by the Employer's Agent, placed in layers a maximum of 200 mm thick and compacted to 95 percent Modified AASHTO (100% for sand) maximum density. All pipe trenches that fall within the road reserves shall be regarded as areas subject to traffic loads.

PSDB 5.9.5 Bitumen Roads: Surfacing

Add the following sentence:
“Trench excavations crossing existing roads must be completed, reinstated and reopened to traffic outside of peak-hours.”

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.3 SCHEDULED ITEMS

PSDB 8.3.2 Excavation

- a) Excavate in all materials for trench excavations and shall be measured and paid as trench excavation in the relevant category according to the existing pipe size. The depth shall be measured to the pipe invert depth. Measurement and payment shall be per cubic metre.
Unit: m³

Payment for pipeline excavations will be measured in linear metres to a depth of between 0.0 to 1.0 metres (one metre) thereafter in steps of 1.0 metres.

- b) Bulk excavation for chambers, concrete structures, and other underground structures
Unit: m³

- c) Bulk excavation for point repairs, launch, retrieval, and access pits
Unit: m³

- d) Extra-over for items (a), (b), and (c):
 - i) Hard rock or material
Unit: m³

- e) Hand excavation in all materials where ordered by the Employer's Agent
Unit: m³

- f) Excavate and dispose of unsuitable material from trench bottom
No payment for overhaul will be made.
Unit: m³

Any deviation in this regard must be approved by the Employer's Agent.

PSDB 8.3.3 Excavation Ancillaries

PSDB 8.3.3.1 Make up Deficiency in Backfill Material

The rate for placing and compacting bedding and blanket material shall be included in the items for excavation and backfilling. No additional payment will be made for placing and compacting bedding and blanket using material from trench excavations.

Where material excavated from trenches is unsuitable for backfill, bedding or blanket material and cannot be reasonably selected from adjacent trench excavations, the Employer's Agent will order the use of material from commercial sources.

PSDB 8.3.4 Particular Items

- a) Shoring trench
Unit: m²

Shoring shall be measured per square metre of the face of the excavation. Should the Contractor elect to use sheet piling it shall be cut off 1,0 m below ground level and the remainder left in-situ. The use of shoring however, does not in any way relieve the Contractor of his responsibilities in terms of the Machinery and Occupational Safety Act.

Where shoring is specified or ordered, it shall be measured per square metre of actual pit face shored. Payment will be categorised in depth increments of 1,0 metres. The tendered sum shall include full compensation for shoring of the trench as specified.

Payment will be categorized into the following classes:

- i) Shoring for depths 1 – 2 m
Unit: m²
- ii) Shoring for depths 2 – 3 m
Unit: m²
- iii) Shoring for depths 3 – 4 m
Unit: m²

iv) Shoring for depths 4 – 5 m	Unit: m ²
v) Shoring for depths 5 – 6 m	Unit: m ²
vi) Shoring for depths 6 – 7 m	Unit: m ²
vii) Shoring for depths 7 – 8 m	Unit: m ²

The rates are not accumulative

b) Temporary Works: Control of Water

Where specialist dewatering measures are required for a project and are to be undertaken by the Contractor, the payment will be in terms of the items provided in the Schedule of Rates, Clause PSA 8.8.7.

PSDB 8.3.6 Finishing (Reinstatement of surfaces)

All inclusive of the following layers: Unit: m²

Roads:

Asphalt surfacing (medium continuously graded) 40 mm thick (CCC medium / COLTO medium)
Tack coat
G4 Base in 150 mm thick layers, to roadways
G5 Subbase in 150 mm thick layers, to roadways

Sidewalks:

G5 Subbase 100 mm thick, to sidewalks and footways
Existing paving to sidewalks and footways
30 mm thick premix to sidewalks (pavement mix / township mix)

Concrete: 25 MPa strength

Brick Paving and Interlocking blocks: To match existing or similar approved by the Employer's Agent. Minimum compressive strength of 25 MPa.

Grass and lawns

Using sods or grass offshoots on 150 mm topsoil and irrigated for at least 3 months or when well established.

Soilcrete

Non-cohesive soil mixed with 5% cement compacted in layers of 100 mm thick to 90% modified AASHTO density. Measured and paid in cubic metres.

Channels

Precast concrete channels laid on 50 mm thick concrete bedding. Measured and paid in linear metres.

Gabions and Reno Mattresses

Gabion and reno mattresses manufactured from PVC coated galvanised steel wires and filled with river cobbles.

The area and volume will be computed from the authorised dimensions measured for each layer after compaction. Payment for finishing will be additional to that for excavation covered by Clause 8.3.2.

The tendered rate shall cover the cost involved as specified in Clause 8.3.6.1.

It will also cover the cost of cutting back of existing layers to provide stepped joints.

PSDM EARTHWORKS (ROAD, SUBGRADE)

PSDM 2.3 DEFINITIONS

PSDM 2.3.1 Sand

Sand is defined as non-plastic material that conforms to the following grading analysis:

% passing	4,750 mm sieve	95% min
	0,425 mm sieve	50% min
	0,075 mm sieve	10% max

and having a maximum swell of 1.5% at 100% Modified AASHTO density.

PSDM 3.2 CLASSIFICATION FOR PLACING PURPOSES

PSDM 3.2.3 Selected Layer

The upper selected layer shall consist of a material which complies with the requirements of a G7 material as described in Table 3B in SANS 1200 M.

The lower selected layer shall consist of a material which complies with the requirements of a G9 material.

PSDM 5 CONSTRUCTION

PSDM 5.1 Precautions

PSDM 5.1.1 Dust Nuisance

The Contractor's attention is drawn to Clause 5.1.4.1 of specification SANS 1200 D. During construction, the Contractor is to make every effort to prevent sand and dust blowing from the Site, including haul roads and stockpiles, onto the adjacent roads or properties.

PSDM 5.2 Methods and Procedures

PSDM 5.2.4.2 Placing and Compaction

All fill materials shall be compacted in layers less than 300 mm thick unless approved by the Employer's Agent. The degree of compaction shall be as follows:

- (a) Sand: 100% of Modified AASHTO density
- (b) all other fill materials: 93% of Modified AASHTO density

The Contractor shall so organise his work that excavated material is placed directly and no additional payment shall be made for stockpiling unless instructed by the Employer's Agent in writing.

PSDM 5.2.5 Selected Layer

The upper selected layer shall be compacted to 95% of Mod. AASHTO maximum density in the case of a non-sand material. Non-sand middle and lower selected layers shall be compacted to 93% and 90% of Mod. AASHTO maximum density respectively.

All sand selected layers shall be compacted to 100% of Mod. AASHTO maximum density.

PSDM 5.2.8 Transport

The whole of the site of the works shall be deemed to be within freehaul distance.

Add the following item:

PSDM 5.2.9 Tie in to Existing Pavement Layers

Where the roadworks tie-in to the existing roads, the Contractor shall cut each existing layer back to form a stepped joint. Each layer shall be stepped back 150 mm from the underlying layer. No separate payment will be made for this work and will be deemed to be included in PSDB 8.3.6: Finishing (Reinstatement of surfaces).

PSDM 8 MEASUREMENT AND PAYMENT

PSDM 8.2 Computation of Quantities

Earthworks quantities shall be measured in compacted fill using cross-sections measured after clearing and roadbed compaction. The rates shall include all costs for the various items as scheduled including all survey costs.

PSL MEDIUM PRESSURE PIPELINES

PSL 2 INTERPRETATIONS

PSL 2.4 ABBREVIATIONS

Add the following:

HDPE - High Density Polyethylene
DI - Ductile Iron
BS - British Standards
EN - European Standards
ISO - International Standards”

PSL 3 MATERIALS

PSL 3.1 GENERAL

Substitute the first sentence with the following:

“The water supply pipelines shall have a minimum working pressure of 12 bar and be uPVC complying with the requirements of SANS 966 or Ductile Iron complying with the requirements of EN545:2010.

HDPE pipes for watermains shall be PE 100 and Class PN 12.5 or PN 16 complying with the requirements of SABS ISO 4427.

The temporary reinstatement of the potable water pipeline shall be carried out using HDPE PE 100 PN 12.5 pipelines.

All steel pipes, pipe specials, and other steel fittings as required by the Employer's Agent shall be mild steel hot dipped galvanised and coated unless otherwise indicated.

The materials and construction of all pipes, fittings, valves and specials shall comply with the appropriate SABS Specification whether stated or not and shall be approved by the Employer's Agent. Cut pipes shall only be used at pipe junctions to position valves and specials as shown on the drawings, and at connections to structures. When laying the pipes, the markings shall be visible from above.”

Add the following:

“The Contractor shall provide adequate storage facilities for pipes, couplings and specials to conform to the following:

(a) Couplings and specials

Until required for use the rubber rings shall be stored in a cool dark place, away from grease, oil or harmful chemicals. If rubber rings have been tied they shall be separated a few days before they are required for use in order to eliminate minor impressions which the ties may have caused.

Couplings into which rubber rings have been fitted, ready for use, shall be stored under cover. All couplings and specials shall be stacked off the ground to ensure that the protective coatings are not damaged.

(b) Stacking and transportation of pipes

The transportation and stacking of pipes shall be strictly in accordance with the manufacturer's requirements.”

PSL 3.3 CI PIPES, FITTINGS AND SPECIALS

In the second sentence:

Change “AC pipes” to “uPVC, HDPE and DI pipes”.

PSL 3.7 OTHER TYPES OF PIPES

PSL 3.7.1 uPVC Pipes

Replace the clause with the following:

“uPVC pipes shall comply with SANS 966 Part 1 and be Class 12 or Class 16, unless otherwise specified on the drawings, and shall be produced in a factory of a registered member of the South African Plastic Pipe Manufacturers Association (SAPPMA). The uPVC pipe manufacturer shall be ISO 9001:2000 accredited and shall be a certified mark holder of SANS 966 Part 1 and must be in possession of a permit to apply the SANS certification mark.”

Add the following item:

PSL 3.7.3 Ductile Iron Pipes

Ductile Iron Pipes shall be Class 40 for DN 200 to DN 300 and Class 30 for DN 350 to DN 500 and be installed with standard spigot and socket joints, with external coating of metallic zinc and internal coating of sulphate resistant Portland cement, all in accordance with Standards EN 545-2010 and ISO 2531-2009 and to the manufacturers specification, on class B bedding, wrapped in polyethylene sleeves of 200µm to the manufacturers specifications.

PSL 3.7.4 High Density Polyethylene (HDPE) Pipes

High Density Polyethylene (HDPE) pipes shall be PE 100 Class PN 12.5 or PN 16 complying with SABS ISO 4427 and be installed with butt welded joints on class B bedding.

PSL 3.8 JOINTING MATERIALS

Add the following items:

PSL 3.8.8 Ductile Iron fittings for PVC pipes

All bends, reducers, T-pieces, flange adaptors, couplings and other fittings for PVC pipe shall be socketed ductile iron (spheroidal graphite iron) fittings complying with the requirements of EN 12842 and have a minimum working pressure of 16 bar.

PSL 3.8.9 Butt Welding of HDPE pipes

The HDPE pipes shall be butt welded into continuous lengths in accordance with the pipe manufacturer's recommendations and SANS 10268-1. Furthermore:

- a. A record shall be kept of the welding including date, pipe details, weather, welding conditions, welder, initial bead height, welding times, final position of joint in the ground and a record of inspections of completed welds.
- b. The welder shall have a Test Certificate for HS Welding (heated-tool butt welding) issued by a South African Qualifications Authority (SAQA) accredited training facility, in accordance with SANS 10269. (Currently certificates are issued by Plastics SA). The welder's certificate shall not be older than three years for Installation and Fabrication Plastic Pipe Association (IFPA) members and not more than one year old for non-IFPA members.
- c. If specified in the specification data, welders shall be IFPA members and shall imprint each weld with his unique IFPA identification stamp displaying the IFPA company number, welder number and IFPA logo, issued in accordance with the Welder Identification System.
- d. Unless otherwise specified in the specification data, the welded joints shall conform to the requirements of SANS 10268 Part 10, according to the quality control rating assessment class II (medium requirements for safety or for load carrying capacity or both). (Note that the assessment class rating is dependent on the safety or load-carrying risk posed.)
- e. If required by the specification data, welded joints shall be tested in accordance with SANS 6269.
- f. If required by the Employer's Agent, before any production welding is commenced, the following shall be approved in accordance with SANS 10270 for heated-tool butt welding of pipe joints:
 - i. A Welding Procedure Specification (WPS) and
 - ii. A qualification joint

- g. have the internal and external welding beads removed where applicable, without leaving notches. If required by the Employer's Agent, the removed beads shall be retained for inspection.

PSL 3.8.10 HDPE Electrofusion fittings for HDPE pipes

Class PN 16 PE 100 HDPE Electrofusion fittings shall be used for HDPE pipes in accordance with SANS 4427.

PSL 3.9 CORROSION PROTECTION

PSL 3.9.2 Steel Pipes

Add the following:

"All carbon steel pipe specials shall be coated internally with average 1500 microns DFT (dry film thickness), minimum 1200 microns DFT, Corrocoat Polyglass VE-series (or equivalent to be approved by the Employer's Agent), and coated externally with 1000 microns nominal DFT Corrocoat Polyglass VE-series (or equivalent to be approved by the Employer's Agent) and be externally finished with Corrothane AP1 (or equivalent to be approved by the Employer's Agent) recoatable polyurethane topcoat, thickness to be fully even cover with no shine through and no ghosting, all applied strictly to the manufacturer's specifications. The applicator of the above corrosion protection system shall be ISO 9001 accredited.

Lined and coated pipes and specials shall be protected against damage at all stages from manufacture to construction. Mechanical damages at any stage to the corrosion protection shall be repaired to the manufacturer's specifications.

The Contractor shall appoint an independent coating inspector to:

- carry out random checks at different stages of the application of the corrosion protection in terms of preparation before application (sand blasting), humidity checks during application, proper use of application equipment, etc;
- take DFT measurements of all the steel pipes, specials and fittings during the different stages of application of the corrosion protection;
- to carry out pinhole testing of all the steel pipes and specials; and
- on completion of the inspection of all the steel pipes, specials and fittings, a Certificate of Conformance has to be issued to the Employer's Agent for approval.

All underground fittings and flexible and flanged joints shall be treated with an approved priming solution, packed with an approved mastic, and wrapped with an approved petrolatum tape with finishing layer by means of cling wrapping.

Payment for corrosion protection and the independent coating inspection shall be included in the rates for the scheduled pipes, fittings and specials."

PSL 3.9.5 Joints, Bolts, Nuts and Washers

Substitute the clause with the following:

All couplings, flanges, bolts, specials and saddles shall be stainless steel Grade 316 and protected against corrosion with an approved petrolatum tape with finishing layer by means of cling wrapping.

PSL 3.9.6 Corrosive Soil

Substitute the clause with the following:

All underground connections of valves, steel or cast iron fittings shall be treated with an approved priming solution, packed with an approved mastic, and wrapped with an approved petrolatum tape with finishing layer by means of cling wrapping.

PSL 3.10 VALVES

Add the following:

All isolating and hydrant valves shall be flanged resilient seal gate valves and shall OPEN CLOCKWISE (left-hand closing), non-rising spindle and cap top, AVK-LHC type or similar approved, drilled Table D BS10. The cap top must be attached to the spindle with a stainless steel grade 316 bolt (and nut depending on type). The valve shall be installed with stainless steel grade 316 nuts and bolts Nickel anti-seize compound.

PSL 3.11 HYDRANTS

Hydrants shall be suitable for a working pressure of 1.6 MPa and be similar in design as the Downright Fire Hydrant, with 65mm inlet and outlet in gunmetal, outlet screwed in London Round thread or V-thread. Hydrants shall OPEN CLOCKWISE (Left Hand Closing) and spindle fitted with Cap Top which is attached to the spindle by means of a stainless steel grade 316 bolt. The outlet shall have a dirt cap secured with chain. The type/make or model of valve must be stated at tender stage. The hydrant's flange shall be 203 mm dia drilled 4 x 18 mm holes of 165 mm P.C.D.

The 'London round' outlet must be a loose unit and be bolted to the hydrant main body by means of Stainless Steel Grade 316 bolts and nuts. Single cast hydrants will not be accepted.

PSL 4 PLANT

PSL 4.3 TESTING

Add the following:

The Contractor must ensure that the test equipment is calibrated every six months, with proof of certificate and remain in good working order.

PSL 5 CONSTRUCTION

PSL 5.1 LAYING

PSL 5.1.1 General

Add the following to the first paragraph:

Pipes and specials shall be lifted only by means of broad band slings.

Replace the last paragraph with the following:

Control of laying and bedding shall be by means of an acceptable laser beam instrument.

Add the following item:

PSL 5.1.5 Connection to Existing Pipelines

Where connections to existing pipelines are required, the Contractor shall excavate well in advance of work being undertaken to expose the connection point to verify that the assumed fittings are available on site and that the connection as proposed can be made. It should be noted that it may be necessary to expose a full pipe length to verify the size and class of pipe in the ground or to locate an existing fitting.

The following will apply:

1. Water supply disruption must be kept to a minimum. (6 hours maximum)
2. Connections will take place after the testing of the new pipeline(s) has/ have been completed.

PSL 5.10 DISINFECTION OF POTABLE WATER PIPELINES

The disinfection of the potable water pipelines shall be carried out by the Contractor and certified by the Employer's Agent.

PSL 7.5 TESTING FOR ENGINEERING SERVICES

PSL 7.5.1 Pipe Trenches

The Employer’s Agent may perform acceptance density tests on pipe trenches in bedding layers and at 500 mm backfill intervals. The Contractor shall notify the Employer’s Agent when the bedding layer and each 500 mm increment layer have been completed. Backfilling shall be done in accordance with SANS 1200 DB Clause 5.7.

PSL 7.5.2 Medium Pressure Water mains

The Employer’s Agent may perform pressure tests and visual inspections in terms of SANS 1200 on mains after completion of any pipe work. Tests for pipe work under roads in such a position that repairs could affect the roadworks must be completed before the Contractor may proceed with any layer works.

Pressure tests may be performed after the bedding layer is placed and compacted, and again when backfilling is complete. The pipework shall only be accepted when the second test has passed.

New installations will be tested against the specified testing pressure as per SANS 1200 L.

For point repairs’ the test pressure of any portion of replaced pipeline will not be more than the existing working pressure of the particular pipeline under repair.

The Contractor shall provide all plugs and testing apparatus.

PSL 7.5.3 Control of Levels (In General)

In the case of water pipelines the levels shall be checked at changes in gradient or at major bends or connection points. The onus is on the Contractor to arrange and verify the check levelling but any deviation from the specified tolerance remains the responsibility of the Contractor. Water mains will be laid according to the following general guideline:

- In footways 700 mm min. cover
- In roadways 900 mm min. cover

PSL 8 MEASUREMENT AND PAYMENT

PSL 8.2 SCHEDULED ITEMS

PSL 8.2.1 Supply, Lay, and Bed Pipes Complete with Couplings

1) Separate pay item into a supply pay item and an installation pay item

Replace Clause 8.2.1 with

- “8.2.1 a) Supply and Deliver Pipes to Site Complete with Couplings Unit: m
Pipelines will be measured by length over all lengths as laid. No deduction will be made for specials and valves. Separate items will be scheduled for each diameter and class of pipe laid.
The rate shall cover the cost of the provision of the pipes complete with couplings, and the costs of delivery to site.
- b) Lay and Bed (Class B), Pipes Complete with Couplings Unit: m
Pipelines will be measured by length over all lengths as laid. No deduction will be made for specials and valves. Separate items will be scheduled for each diameter and class of pipe laid.
The rates shall cover the costs of the handling, inspecting, transporting, bedding, laying, jointing (including butt welding, where applicable), cutting, testing and, when relevant, disinfecting of the pipes and the joints. (See 8.2.4.)

2) Short lengths less than 10 metres Unit: m

The laying of short pipe lengths less than 10 metres for certain erf connections and point repairs shall be measured and paid separately.

PSL 8.2.2 Butt welding

The butt welding for the laying of watermain shall be measured and paid separately for establishment and de-establishment only.

Establishment and de-establishment per butt welding assignment including provision of power Unit: No

The actual butt welding procedure is deemed to be included in the Lay and Bed rate for HDPE PE 100 pressure pipes. See Clause PSL 8.2.1 (a).

PSL 8.2.3 Jointing for point repairs

Cut into existing pipeline and connect new pipeline and specials and make good, including hand excavation, disposal of surplus material and supply two long collar detachable joints Unit: No

Measured and paid per existing main diameter.

PSL 8.2.5 Connect into existing pipelines

Cut into existing FC pipeline and connect new pipeline, specials, fittings and make good, including hand excavation, disposal of surplus material Unit: No

Measured and paid per existing main and new main diameters.

PSL 8.2.6 Ductile Iron fittings for uPVC pipes

Ductile Iron fittings for uPVC pipes Unit: No

Measured and paid per diameter of fitting.

Rate shall include for the supply, installation, testing of the fitting

PSL 8.2.7 HDPE Electrofusion fittings for HDPE pipes

HDPE Electrofusion fittings for HDPE pipes Unit: No

Measured and paid per diameter of fitting.

Rate shall include for the supply, installation, testing of the fitting.

PSL 8.2.8 VALVES

8.2.8 a) Supply and deliver to site flanged resilient seal gate valve Unit: No

b) Demolish existing valve chamber, supply remaining materials, reconstruct and install gate valveUnit: No

Measured and paid per diameter of valve.

The installation rate shall include for demolishing existing chamber and reconstructing it with new valve installed.

The existing covers and frames shall be re-used.

PSL 8.2.9 FIRE HYDRANTS

8.2.9 a) Supply and deliver to site 70 mm diameter flanged hydrant valveUnit: No

b) Demolish existing hydrant chamber, supply remaining materials, reconstruct and install hydrant gate valve Unit: No

Measured and paid per diameter of watermain and whether hydrant is on-line or off-line

Installation rate shall include for removing and replacing the existing hydrant valve, hydrant tee, extension pieces and bends (if any) and reconstructing and making good.

The existing covers and frames shall be re-used.

PSL 8.2.10 REPLACE HOUSE CONNECTIONS

8.2.10 a) Supply and deliver to site selected pipes..... Unit: m

b) Supply and deliver to site approved ball valves and saddles..... Unit: No

Measured and paid per type and diameter.

Ball valves shall be full bore, hot pressed 2 piece brass body, nickel plated with brass ball hard chrome plated with PTFE seals. The valves shall have an anti-blowout stem and a stainless steel Nylock nut.

Saddles for 15 mm, 20 mm and 25 mm diameter connections to 110 mm and 160 mm diameter watermain to be approved Alprene or Magnum PP saddles with DZR brass insert and stainless steel grade 316 nuts and bolts and Nickel anti-seize compound and C20 Cobra ball valve.

Saddles for 15 mm, 20 mm and 25mm diameter connections to 200 mm, 250 mm, 315 mm and 355 mm diameter watermain to be stainless steel saddles comprising two half round sections with O-ring sealing arrangement and bolted with 6 stainless steel grade 316 nuts and bolts and Nickel anti-seize compound.

Saddles for 40 mm diameter connections to 110 mm, 160 mm, 200 mm, 250 mm, 315 mm and 355 mm diameter watermain to be stainless steel saddles comprising two half round sections with O-ring sealing arrangement and bolted with 6 stainless steel grade 316 nuts and bolts and Nickel anti-seize compound.

The stainless steel saddles shall be 200 mm wide for 110 mm and 160 mm diameters, 250 mm wide* for 250 mm diameter, and 300 mm wide for 250 mm, 315 mm and 355 mm diameters.

c) Excavate, lay, bed, joint erf connection pipes of following material and diameter, as per standard detail 1 (supply of materials measured separately)... Unit: m

Measured and paid per diameter of connection and diameter of watermain connected to.

Install rate shall include for disconnecting existing 15 mm, 20 mm and 25 mm property connections and replacing using approved saddles and applicable BSP socket and approved DZR ball valve (C15, C20, C25 approved) to the watermain.

Install rate shall include for disconnecting existing 40 mm property connections and replacing using approved saddles with a 1 ¼ " BSP socket and approved Cobra #1025 pattern stopcock to the watermain.

PSL 8.2.11 TEMPORARY WATER BYPASS TO SUPPLY WATER TO AFFECTED PROPERTIES

Supply, install, maintain and dismantle water bypass pipeline Unit: m

Measured and paid per bypass pipe diameter and per length of bypass pipeline.

Rate shall include for the supply, installation, connection of HDPE PN 12.5 PE 100 bypass pipeline to service section of affected properties along the water pipeline upgrading (measured along the length of the properties), its maintenance for the duration of the work and its eventual dismantling. The rate is inclusive of all non-leak fittings. The 32/40 mm diameter bypass pipeline is with compression tees and fittings only.

PSL 8.2.12 Connect into existing pipelines (Watermain Tie-ins)

Cut into existing FC pipeline and connect new pipeline, specials, fittings and make good, including hand excavation, disposal of surplus material	Unit: No
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Measured and paid per existing main and new main diameters, material specification and associated fittings.

PSL 8.2.14 Ductile Iron Surface Box for Gate Valves (Bell Toby)

Supply and installation of Bell Tobies Unit: No

PSL 8.2.15 REPLACE WATER METERS

8.2.15 a) Supply and deliver to site approved water meter of diameter Unit: No

a) Supply and deliver to site approved water meter of diameter	Unit: No
b) Remove existing water meter, supply remaining materials and install new water meter	Unit: No

Measured and paid per diameter of water meter.

PSLB	BEDDING (PIPES)	
PSLB 3	MATERIALS	
PSLB 3.1	SELECTED GRANULAR MATERIAL	
	Selected granular material shall be of a granular, non-plastic nature and shall conform to the following grading: % passing 4,750 mm sieve 95% min 0,425 mm sieve 50% min 0,075 mm sieve 10% max and shall have a compactibility factor (as determined by the test given in Section LB, Part 3 of SANS 0120) not exceeding 0,4.	
PSLB 3.3	CLASS OF BEDDING	
	Sewer pipes shall all be laid on Class B bedding, unless otherwise shown on the Drawings, or instructed by the Employer's Agent.	
PSLB 3.4	SELECTION	
	Suitable selected bedding material will be available from the trench excavations along the route. Should additional selected granular material be required, it shall be obtained from other excavations on the site or imported from commercial source.	
PSLB 3.4.1	Contractor to Excavate Selectively for Bedding Materials	
	Notwithstanding the requirements of Subclause 3.7 of SANS 1200 DB and Subclause 3.4.1 of SANS 1200 LB regarding the use of selective methods of excavating, the Contractor shall use selective methods of excavating and shall provide and use plant that will enable him to avoid burying or contaminating material that is suitable and is required for bedding.	
PSLB 5	CONSTRUCTION	
PSLB 5.1.4	Compacting	
	The degree of compaction of the bedding shall be 100% of Modified AASHTO in sand and not less than 93% in the case of non-sand materials.	
PSLB 8	MEASUREMENT AND PAYMENT	
PSLB 8.1	SCHEDULED ITEMS	
PSLB 8.2.1	Provision of bedding and selected fill material from trench excavations	
	a) Selected granular material	Unit: m³
	b) Selected fill material	Unit: m³
PSLB 8.2.2	Supply only of bedding material by importation	
PSLB 8.2.2.3	From commercial sources (Provisional)	
	a) Selected granular material	Unit: m³
	b) Selected fill material	Unit: m³
	Add the following item:	
	c) 19 mm stone	Unit: m³
	Where the use of a crushed stone bedding layer in the trench bottom has been authorised by the Employer's Agent, it will be measured by the volume calculated according to the length multiplied by the minimum base width and specified thickness.	
	The tendered rate shall cover the cost of preparation of the trench bottom to accommodate the crushed stone layer in order to produce a stable platform for the pipes.	
	Add the following item:	
PSLB 8.2.6	Geotextile / Geomembrane wrapped around 19 mm stone bedding with 300 mm overlay	
	A2 or similar approved	Unit: m²
	The item will be measured in place after installation. The tendered rate shall include full compensation for procuring, supplying, cutting, overlapping, jointing, placing and protecting the Geotextile / Geomembrane as specified as well as for wastage.	

Add the following item:

PSLB 8.2.7 Soilcrete

Non-cohesive soil mixed with 10% cement compacted in layers of 100 mm thick to 90% modified AASHTO density. Measured and paid in cubic metres.

PSLD SEWERS

PSLD 3 MATERIALS

PSLD 3.1 PIPES, FITTINGS AND PIPE JOINTS

PSLD 3.1.5 uPVC Pipes

uPVC Class 34 heavy duty pipes and couplings to SANS 791 shall be used for the new sewer pipes to be laid.

PSLD 3.5 MANHOLES, CHAMBERS, ETC.

PSLD 3.5.1 Bricks

Bricks shall be obtained from an approved manufacturer and shall be special grade Class NFX (Non-facing Extra) clay bricks to SANS 227 with a nominal compressive strength of 21 MPa and a water absorption of not more than 10%. In addition, perforated bricks with cavities not exceeding 25% are acceptable. The Contractor shall submit to the Employer's Agent samples of the bricks that he intends using in the construction of the Works (see subclause 3.1 of SANS 1200 A or SANS 1200 AA, as applicable). The samples of bricks that are approved will be retained by the Employer's Agent.

PSLD 3.5.2 Precast concrete sections

The precast manhole sections shall comply with SANS 1294.

PSLD 3.5.4 Concrete

Concrete shall be strength concrete in accordance with SANS 1200G as applicable and only uncontaminated dolomitic aggregate and free from organic material and hard burnt lime shall be used in any concrete that may be exposed to sewerage or sewer gases. The insolubility content of the completed concrete may not exceed 25%.

PSLD 3.5.5 Sand and aggregate

Uncontaminated dolomitic aggregate and dolomitic sand shall be used in the manufacture of all precast concrete manhole units and in the manufacture of all concrete or mortar in direct or indirect contact with sewage and/ or sewer gases.

PSLD 3.5.7 Step Irons

Step irons shall be installed in all manholes with a depth exceeding 1,0 metres. Step irons shall be manufactured from a polypropylene copolymer and shall have anti-slip blocks on the stepping surface. Step irons manufactured from other material shall be approved by the Employer's Agent. The step irons shall be position on the downstream end (manhole exit point) of the manhole. Step irons to be staggered 300 mm centre to centre.

PSLD 3.5.8 Manhole Covers and Frames

Covers and frames of manholes in roadways shall be finished flush with the final road level. Where manholes are not in the roadway, the final cover level shall be constructed to 150 mm above the natural ground level unless otherwise indicated. Covers and frames for manholes shall be of "DM" type Ductile Iron as approved by the Employer's Agent.

PSLD 3.5.9 Cement

Portland Slag Cement CEM II/B-S 42,5 or any other similar approved cement shall be used for all mortar and concrete work.

PSLD 5 CONSTRUCTION

PSLD 5.6 MANHOLES, INSPECTION CHAMBERS, ETC.

PSLD 5.6.2 Benching

Concrete for benching (and manhole floors) shall be Class 20 MPa/13 mm strength concrete and shall be cast in-situ. The concrete shall conform to SANS 1200G. The invert channels shall be of FC.

PSLD 5.11 Watertightness of Repairs

Repairs shall be visually inspected for ingress or egress of water. All repairs shall be watertight.

PSLD 5.12 Plasterwork and Grouting

All internal faces to repairs shall be plastered using Lafarge Aluminate's Corrosion Protection (CP4) Grout, or any Employer's Agent approved similar product being a ready mixed calcium aluminate and dolomitic sand mix suitable for plastering with a maximum setting time of 4 hours. The plaster shall be 13 mm thick. Prior to using any product for plastering purposes, technical recommendations shall be obtained from the supplier for mixing, placing and curing.

An Employer's Agent approved ready mixed calcium aluminate and dolomitic sand mix, approved by the Employer's Agent, suitable for grouting with a maximum 2 hour setting time shall be used to repair areas subject to severe corrosion. Prior to using the material, technical recommendations for mixing, placing and curing shall be obtained from the supplier and provided to the Employer's Agent.

PSLD 5.13 Precast concrete ring joints

The joints between precast concrete rings shall be made watertight. The Contractor shall apply a bitumen primer and a 20 mm x 20 mm bitumen strip onto the joint face prior to closing the joints. The Contractor shall submit a method statement for sealing the ring joints to the Employer's Agent for approval prior to construction.

PSLD 7.5 TESTING FOR INFRASTRUCTURE SERVICES

PLD 7.5.1 Pipe Trenches

The Employer's Agent may perform acceptance density tests on pipe trenches in bedding layers and at 300 mm backfill intervals. The Contractor shall notify the Employer's Agent when the bedding layer and each 300 mm increment layer have been completed. Backfilling shall be done in accordance with SANS 1200 DB Clause 5.7.

PLD 7.5.2 Sewer Pipes

The Employer's Agent may perform pressure tests and visual inspections in terms of SANS 1200 on sewer pipes after completion of any pipework. Tests for pipework under roads in such a position that repairs could affect the roadworks must be completed before the Contractor may proceed with any layerworks.

Pressure tests may be performed after the bedding layer is placed and compacted, and again when backfilling is complete. The pipework shall only be accepted when the second test has passed.

Sewer manholes shall be visually inspected for ingress of water and shall be watertight.

New installations will be tested against the specified testing pressure as per SANS 1200 LD.

New sewers will be tested as per SANS 1200 specifications. Where portions of a sewer are repaired, only such portions will be required to be tested,

The Contractor shall provide all plugs and testing apparatus.

PSLD 7.5.3 Control of Levels (In General)

Invert levels shall be controlled by laser beams or sight rails.

The Contractor shall check the invert level of the laid pipe at each manhole position prior to the construction of the manhole. The onus is on the Contractor to arrange and verify the check levelling but any deviation from the specified tolerance remains the responsibility of the Contractor.

PSLD 8 MEASUREMENT AND PAYMENT

PSLD 8.2 SCHEDULED ITEMS

PSLD 8.2.1 Supply, Lay, Joint, Bed, Test Pipes Complete with Couplings

1) Separate pay item into a supply pay item and an installation pay item

In order to allow the Local Content of Plastic Pipes to be determined in the Local Content Schedule, it is necessary to separate the supply and the installation of plastic pipes as follows.

Replace Clause 8.2.1 with

- "8.2.1 a) Supply and Deliver Pipes to Site Complete with Couplings Unit: m
Pipelines will be measured linearly on slopes overall as laid. No deductions will be made for specials, but deductions will be made for the internal length of manholes. Separate items will be scheduled for pipes of different materials, diameters and, where relevant, classes, and for different classes of bedding and types of joints.
The rate shall cover the cost of providing the pipes complete with couplings, and the costs of delivery to site.
- b) Lay, Joint, Bed (Class B), Test, Pipes Complete with Couplings Unit: m
Pipelines will be measured linearly on slopes overall as laid. No deductions will be made for specials, but deductions will be made for the internal length of manholes. Separate items will be scheduled for pipes of different materials, diameters and, where relevant, classes, and for different classes of bedding and types of joints..
The rates shall cover the cost of laying, bedding, jointing, making connections into manholes, and testing the pipeline.

2) Short lengths less than 10 metres Unit: m

The laying of short pipe lengths less than 10 metres for certain erf connections and point repairs shall be measured and paid separately.

PSLD 8.2.3 Manholes Unit: No

Add the following:

The depth increment for manholes will be per each 1,0 metres.

For the purposes of measurement and payment, the depth of a manhole is defined as the depth from the top of the natural ground/ finish surface level to the lowest invert level of the manhole (the downstream invert)

The rate shall cover the cost of construction, manufacturing, supplying, handling and transport of the manholes complete with short pipes and all flexible couplings. The rate shall include for FC channels, joint sealing and specified cover and frame.

PSLD 8.2.11 Connection to sewer at existing manholes

Add the following:

a) Break into existing sewer manhole and connection of new sewer Unit: No

The unit of measurement shall be the number of connections of the new sewer into existing live manholes indicated on the relevant drawings.

The tendered rate per connection shall include full compensation for all necessary material, labour, plant and tools required to excavate and expose the existing manhole, which the new sewer is to connect into, and for all additional excavations which may be required to satisfactorily complete the connection to break into the existing sewer manhole and connect the new sewer including flexible joint, make good any damage caused during the breaking in process, and deal with the flow in the existing sewer.

The rate shall also include the provision and reconstruction of the channel in the existing manhole, including all benching, etc, the taking of all necessary preventative and precautionary measures whilst making the connection, blocking off the ends of any sewer pipe which is to be abandoned, and to liaise with and abide by the requirements, if any, of the Employer before and during construction of the connection.

b) Construct new manhole over live sewer

Unit: No

The tendered rate shall include full compensation for all material, labour, plant and tools to excavate and expose the existing sewer (excavation will be measured under PSDB 8.3.2, to construct the new manhole including flexible joint, to break into the live sewer and temporarily accommodate the sewage flow, to provide and construct the channel and benching in the new manhole, and to block-off and seal any sewer line which is to be abandoned. The depth increment for manholes will be per each 1,0m.

- c) Locate and reconnect existing property connections to new HDPE sewer main installed by pipe bursting

Unit: No

Pay item measured per connection and main pipe diameters.

Rate tendered to include for locating and reconnecting property sewer connects to the new HDPE sewer main after the main has been installed by pipe bursting. The connection to be made using Plasson Marley electrofusion welded Y-Junction and 45 degree bends. (PVC strap on saddles are not permitted.)

- d) Connect new 110 mm diameter connection into existing 450 mm x 600 mm brick inspection chamber and repair and make good

Unit: No

The unit of measurement shall be the number of inspection chambers connected into.

The tendered rate per connection shall include full compensation for all necessary material, labour, plant and tools required to excavate and expose the existing manhole, which the new sewer is to connect into, and for all additional excavations which may be required to satisfactorily complete the connection to break into the existing inspection chamber and connect the new sewer including flexible joint, make good any damage caused during the breaking in process, and deal with the flow in the existing sewer.

The rate shall also include the provision and reconstruction of the channel in the existing chamber, including all benching, etc, the taking of all necessary preventative and precautionary measures whilst making the connection, blocking off the ends of any sewer pipe which is to be abandoned, and to liaise with and abide by the requirements, if any, of the Employer before and during construction of the connection.

- e) Construct new fibre-cement boundary inspection chamber (1000 mm diameter)

Unit: No

The tendered rate shall include full compensation for all material, labour, plant and tools to excavate and expose the existing sewer (excavation will be measured under PSDB 8.3.2), to construct the new fibre-cement boundary inspection chamber (1000 mm diameter) after the replacement of the property connection (including all materials – S.SYSTEM chamber, channels/splits, benching, cover slab and medium duty ductile iron cover and frame)

PSG CONCRETE (STRUCTURAL)

PSG 1 SCOPE

This specification covers the requirements for concrete for the sand traps and screening equipment, but can also be utilize for other concrete works.

PSG 3 MATERIALS

PSG 3.2 Cement

All cement used in the works shall be Portland cement CEM I of strength class 42,5 complying with SABS ENV 197-1.

Where "blast furnace slag concrete" is specified on the drawings, or scheduled, blast furnace slag shall be a constituent of the concrete as specified in PSG 3.9.

PSG 3.2.2 Storage

Cement and slagment shall be used in the order in which it is received.

Unless approved by the Engineer, cement and slagment kept in storage for longer than 8 weeks shall not be used in the Works. Cement shall be stored in weather-proof silos or in pockets in weatherproof sheds provided with damp-proof floors at least 300 mm above ground level and covered with tarpaulins or other water-proof membranes. Cement shall be used in the order of delivery (First-in-first-out). Cement left in unsealed pockets shall also be removed from site and discarded.

Cement silos shall be painted white to reduce temperature rise in the cement.

Any cement that contains lumps that cannot easily be crumbled to powder between the fingers, may not be used.

PSG 3.3 Water

Only potable quality water from an approved source may be used for mixing concrete. Water from a river or stream may however be used for curing.

PSG 3.4 Aggregates

The nominal stone size specified in the concrete grade (e.g. 30 MPa/40 mm) shall mean stone conforming to the grading specified in SABS 1083 for the nearest equivalent size, i.e. 40 mm means stone that complies with SABS 1083 for 37, 5 mm size.

PSG 3.4.2 Use of plums

The use of plums will not be permitted.

PSG 3.4.4 Fine aggregate *

The fineness modulus of the sand delivered to the mixer shall lie between 1,7 and 2,8 and the standard deviation of fineness modulus of samples of sand that is delivered to the mixer during one shift shall be not more than 0,10.

PSG 3.4.5 Concrete using reactive aggregates *

The Contractor shall provide the Engineer with sufficient data to enable him to assess the degree of alkali-aggregate reactivity of the aggregates to be used for concrete.

Where reactive aggregates such as Malmesbury Group aggregates, and certain Table Mountain Formation and other quartzitic aggregates are used for concrete, the Contractor shall, in order to ensure that the concrete is not subject to alkali-aggregate reaction, design his mixes and/or use cement with a sufficiently low alkali content such that the total equivalent sodium oxide content of the concrete is less than 1,8 kg/m³.

(NOTE: The equivalent sodium oxide content (alkali content) is measured as (Na₂O + 0,658 K₂O). For cement it is expressed as a percentage by mass, for concrete it is expressed in kg/m³).

In the case of other aggregates that are less reactive the Engineer will determine the type and degree of precautionary measures to be adopted.

PSG 3.4.6 Dolomitic aggregate

All coarse and fine aggregate used in in-situ concrete, mortar or plaster which will be subjected to sewage gases, shall be dolomitic.

PSG 3.4.7 Samples

At least one month before commencement of concrete work the Contractor shall supply at his own cost representative samples to the Engineer of the aggregates he intends using, together with certificates from an approved laboratory indicating that the aggregates comply with the specifications. Approximately 50 kg of each sample of aggregate shall be supplied.

When tested in accordance with the method specified in Appendix C of SABS 677, not more than 25% by mass of the dolomitic aggregate shall be insoluble in hydrochloric acid.

After approval these samples shall be taken as standard for the agreed aggregates to be used in the Works. If at any time during the course of the Contract the Engineer considers that there has been any deviation from the approved standard the Contractor shall submit further tested samples of material to the Engineer for approval.

PSG 3.5.1 Admixtures

The use of admixtures will be subject to the approval of the Engineer. The information listed in Clause 3.5.1 shall be provided.

PSG 3.5.2 Air-entraining agents

No air-entraining agents shall be used.

PSG 3.5.3 Waterproofing admixture *

A waterproofing admixture Xypex Admix C500NF (or similar approved) shall be added to the concrete at the batching plant, at a dosage rate of 1.5% by weight of total cementitious material (including blast furnace slag).

PSG 3.9 Cementitious material for blast furnace slag concrete *

The cementitious material for blast furnace slag concrete shall consist of not less than 50% by mass of portland cement complying with SABS 471 and not more than 50% by mass of milled granulated blast furnace slag. The ratio of blast furnace slag to cement may be varied by the Engineer before or during the Contract.

Blast furnace slag shall be milled, granulated blast-furnace slag processed from an approved source and shall be of a consistent quality. It shall be ground to a minimum fineness of 3 500 Blaine (square centimetres per gram). The percentage by mass retained on an 88 micrometre screen shall not exceed 10%.

The blast furnace slag and the ordinary portland cement shall be added separately at the mixer where they shall be intimately mixed.

PSG 3.10 Materials for construction and movement joints *

The various jointing materials, the manufacturers of the materials and the methods of application shall be as approved by the Engineer. Materials shall be stored and protected to avoid damage, degradation, distortion or contamination.

PSG 3.10.1 Waterstops

Waterstops shall be of approved manufacture and of the pattern and the material and widths scheduled and specified and shown on the drawings.

All intersections between waterstops shall be prepared by mitering and welding/vulcanising intersection pieces in the factory in accordance with the manufacturer's instructions and to approval of the Engineer. Only straight lengths of waterstop may be field welded using the appropriate jigs and tools.

Where required, waterstops shall have eyelets so that they may be tied securely to the adjacent reinforcement. "Rearguard" –type waterstops shall have flanges or cleats that grip effectively.

PSG 3.10.2 Joint Fillers (if applicable)

Closed cell expanded polyethylene fillers shall comply with the following:

Property	Unit	Value Test Method
Density	110 Kg/m ³	DIN 53420
Compression Stress at/strains of		
10%	175 kPa	DIN 53477
25%	210 kPa	DIN 53477
50%	340 kPa	DIN 53577
Compression set after 24 hours recovery	14%	
Tensile Strength	680 kPa	DIN 53571
Elongation at Break	49%	DIN 53571
Max. water absorption after 24 hours by volume	0,1%	ASTM C-177

Fillers shall be precut to suit the application with a tear-out strip for forming the specified recess for the sealant. If so required the filler shall be glued into position with an approved epoxy glue.

PSG 3.10.3 Bondbreakers, primers and sealants (if applicable)

The bond breaker and seal between the top of the blinding layer and the underside of the floor slab / no-fines concrete shall be either a double coat of spray grade bitumen emulsion (2 mm thick) complying with SABS 309 or a 300 micrometre HDPE sheet complying with SABS 952, Type D.

The bond breaker (if specified) shall be self-adhesive PVC tape (or similar, approved material) with a width the same as the joint recess into which it is to be applied.

The primer, if required for the sealant, shall be fully compatible with the sealing compound that is to be used.

Sealant in contact with potable water (or water which is to be processed for use as potable water) shall have been tested to ensure that they are non-toxic and do not impart any taste or odour to the water.

The elastomeric sealant shall be either a two-component polysulphide liquid polymer base complying with the requirement of SABS 110 or a polyethylene based polyurethane "pouring grade" for horizontal or near horizontal joints or "gun grade" for vertical/overhead joints and joints steeper than 1 in 1- to the horizontal. All elastomeric sealants shall comply with BS 4254 Type A1 and shall have a movement tolerance of 25%.

Bituminous sealants shall be of a "hot pour" grade and shall comply with the requirements of BS 2499 Type A1 (e.g. "Pliastic 77", Bitujoint", "Bitulastic" or similar, approved).

Note: Elastomeric and bitumen-based sealants are incompatible with one another; they may not be allowed to come into contact with each other. If they are used in close proximity to one another, contamination of surfaces must be prevented. A layer of inactive material shall be used at any point of contact between the two types of material, to prevent direct contact.

PSG 3.10.4 Butyl rubber laminate bandages (if applicable)

Joint sealing bandage strip (if specified) shall consist of an approved high strength butyl rubber laminate of thickness and width shown on the drawings. The laminate shall have an elongation at break of not less than 300% and a minimum tensile strength of 8,0 MPa.

The special epoxy based adhesive to be used for achieving a high-strength bond between the laminate and the concrete and the special materials for overlaying the butt joints shall be as specified by the manufacturers of the butyl rubber laminate.

PSG 4 PLANT

PSG 4.4 Mixing plant and vibrators

Stand-by mixers and vibrators of adequate capacity and with an independent power unit shall be maintained on site for immediate use in the event of breakdown of the regular mixers or vibrators or failure of the power supply.

PSG 4.5 Formwork

PSG 4.5.1 Formwork design

Formwork panels shall be made of steel panels. Small approved laminated wooden board inserts to steel framed panels may only be used in confined places and the use thereof will be subject to approval by the Engineer.

PSG 4.5.3 Formwork ties

The use of ferrules or sleeves for formwork ties through the walls of water-retaining structures will not be permitted. Ties, when cast in, shall have some form of positive anchorage to prevent any rotation when loosening formwork.

Formwork ties to be used shall be of the 12mm Extended Coil Tie with Water-Bar type. The Contractor shall allow in his rates for the specified formwork ties and ensure that his formwork is compatible with these ties. No ferrous metal shall remain closer to the surface of the concrete than the cover specified for the reinforcement.

PSG 4.5.4 Formwork: chamfers and fillets *

All exposed external angles in concrete work shall have 20 mm x 20 mm chamfers unless otherwise specified or ordered, but the top edge of a slab that is to receive an applied finish shall not be chamfered.

Internal corners in concrete work need not have fillets unless such fillets have been specified on the drawings or ordered by the Engineer.

PSG 4.6 Water-bath *

A temperature-controlled water-bath with a capacity to cure 75 cubes shall be provided on site. The water-bath shall be located under cover.

PSG 5 CONSTRUCTION

PSG 5.1 Reinforcement

PSG 5.1.2 Fixing

Fixing of reinforcing bars by welding will not be permitted without the prior approval of the Engineer. Where welding is approved the methods used shall be subject to the Engineer's approval. Where called for, samples of the typical reinforcement to be welded will be sent to a laboratory, designated by the Engineer, for testing purposes. Under these circumstances the welding of the samples shall be carried out on the site by the welder to be subsequently employed on the job, and carried out under the conditions which will prevail during the actual site welding. Where welding is permitted by the Engineer, it shall be carried out in strict accordance with the relevant SABS Codes of Practice.

PSG 5.1.3 Cover

In Clause 5.1.3(a) amend the words "bar or stirrup" to read: "bar, secondary reinforcement, tie, stirrup, tying-wire knots or wire ends".

Add to Clause 5.1.3: "Tying wire may not encroach on the specified minimum cover by more than a single strand thickness."

PSG 5.1.3.1 Spacers *

Spacers shall be purpose made precast mortar blocks.

The mortar blocks shall be properly shaped so as not to slip out of position and shall be made of the same mix as the mortar of the concrete in which they are to be placed. The mortar shall be well

compacted by approved means into the moulds to result in blocks with a density of at least 2 300 kg/m³ and which are free from honeycombing. The mortar blocks shall be cured in water for at least 7 days. Blocks which have not been manufactured and cured strictly in accordance with these requirements or which are in any other way considered unsatisfactory by the Engineer, will be rejected and shall be removed from the Site.

PSG 5.2 Formwork

PSG 5.2.1 Classification of finishes

Formwork for formed concrete surfaces against which backfill will be placed shall be rough. Formwork for all other formed surfaces shall be smooth, except where otherwise specified.

PSG 5.2.5.2 Removal of formwork for blast furnace slag concrete

The requirements specified in Clause 5.2.5.2 for the removal of formwork in the case of portland blast furnace cement shall apply for blast furnace slag concrete.

PSG 5.4 Casting pipes and specials in concrete

Where the pipe or special is supplied by others the Contractor shall provide a box-out in the wall and cast the unit in at a later stage. When constructing such box-outs reinforcement shall not be cut but shall run through the opening. Reinforcement shall be cut and/or bent out at a later stage to suit the item being cast in. After installation of the item the remaining reinforcement shall be bent back in position.

Where entry holes for pipes/specials have been provided in the walls, the Contractor shall be responsible for the concreting in of such pipes/specials regardless of whether or not these have been supplied by himself.

Before commencing the positioning in holes of any pipes/specials the Contractor shall:

- remove all formwork and boxing remaining in the holes;
- make any alterations required to the position and shape of the holes and cut reinforcement to suit the item, as directed by the Engineer; and
- thoroughly scabble the sides of the holes so as to obtain a satisfactory bond surface for the new concrete and treat the surface as specified in Clause 5.5.7.3.

Immediately prior to concreting being carried out by the placing of mortar and concrete around the pipes, the surface of the existing concrete shall be saturated with water. All surplus water shall be removed and the surface covered with a layer, approximately 12 mm thick, of mortar made of the same mix as the concrete in which the pipes/specials are to be placed.

The concrete ingredients shall be mixed and placed as dry as possible to obtain a dense, waterproof concrete. The concrete shall be carefully worked around the puddle flange, if any, and the pipe barrel or body of the special, and shall be vibrated in layers so as to obviate a falling away from pipe/special surfaces of the concrete already placed. The whole shall, when set, form a dense, homogeneous, and waterproof mass.

PSG 5.5 Concrete

PSG 5.5.1.1 General

The concrete mix design for strength concrete must be prepared in an approved laboratory and the results of actual test mixes must be submitted for approval together with 7-day and 28-day strength test results. Special attention is drawn to the fact that the concrete mix must provide a very dense and impervious concrete.

No concrete shall be cast until the mix designs have been approved by the Engineer. The Engineer may call for revised mix designs at any stage during the Contract.

PSG 5.5.1.4 Chloride content

The maximum chloride content (as Cl⁻, % (m/m)) in the concrete shall not exceed 0.20%.

PSG 5.5.1.5 Durability

The water : cement ratio shall not exceed 0.45.

PSG 5.5.1.7 Strength concrete

With the exception of mixes weaker than 15 MPa, all concrete for the Works shall be considered to be strength concrete in terms of Clause 5.5.1.7.

Strength concrete shall be Grade 40 MPa/19 mm.

The total alkali content of the concrete shall not exceed 2.1 kg/m³. The Contractor shall submit the necessary test results before commencing with construction.

A concrete mix design shall ensure adequate strength, durability and impermeability. The mix design is to comply with the following minimum requirements:

- The minimum binder content shall be 340 kg/m³, of which 50% by mass shall be CEM1 Portland cement and 50% shall be blast furnace slag.
- The maximum water/cementitious product ratio by mass shall be 0.45.
- Coarse aggregates shall have a low coefficient of thermal expansion of not greater than 10x10⁻⁶ °C and shall have a maximum water absorption < 1%
- The minimum characteristic strength at 28 days shall be 40MPa.

In order to facilitate improved workability of concrete in the fresh/plastic state, to ensure watertightness without increasing the water/cement ratio, the Engineer may approve the use of an admixture as specified in PSG 3.5.1.

The workability of concrete shall be assessed by means of the slump test. The slump shall be between 30 and 50 mm for 30-40 MPa strength concrete.

The Contractor's concrete mix design shall be submitted to the Engineer for approval.

PSG 5.5.2 Batching

Batching of strength concrete shall be by mass.

PSG 5.5.3.2 Ready-mixed concrete

Concrete from a central concrete production facility other than on the construction site will be permitted and, apart from test results in terms of 7.3.1, 7.3.2 and/or 7.3.3, test results obtained by such a production facility as part of its quality control system will be accepted for evaluation in terms of Clause 7.3.4, provided they are stored and cured on site.

PSG 5.5.5 Placing

Structural concrete shall not be cast directly against the side of any excavation without the use of formwork unless prior approval has been obtained in writing from the Engineer.

Concrete used in pipe trenches for encasement may be cast directly against the side of the excavation. Concrete for thrust/anchor blocks shall be cast directly against the side of the excavation.

PSG 5.5.5.10 Prevention and repair of plastic shrinkage cracks *

The Contractor shall take whatever measures are necessary to prevent plastic shrinkage cracking in the concrete. Particularly on dry windy days or hot sunny days the Contractor shall make provision for fine spraying of the concrete surface with water within one hour of casting or covering of the concrete with black plastic sheeting. It may be necessary to change the aggregates or the concrete mix proportions. In order to combat shrinkage cracking it may also be necessary to change the time at which, or the manner in which, power floating is carried out.

If plastic shrinkage cracking occurs, the cracks shall be closed up by revibrating the concrete with a poker vibrator, within about three hours of casting. Once the cracks have been closed, the concrete shall be kept thoroughly wet, or covered with plastic sheeting for at least a further three hours.

PSG 5.5.7 Construction joints

Unless construction joints between designated joints shown on the drawings are authorized by the Engineer in writing, concrete shall be cast continuously between the designated joints shown on the drawings.

Construction joints shall be constructed with an approved hydrophillic profile and prepared with a waterproofing concentrate slurry coat according to the manufacturer's specifications.

PSG 5.5.7.4 Formed joints *

Formed joints will be considered to be designated joints as defined in Clause 2.4.3.

Each joint shall be formed as shown on the drawings, complete with shear key rebates, waffle formwork, V-feature, waterstops, "Flexcell" or similar joint filler, dowel bars and their PVC tubes, etc. as indicated.

PSG 5.5.7.5 Joints between floors and walls *

Construction joints between floors and walls may be made flush with the supporting surface, and can also be made at a distance above the footing or floor shown as on the drawings or approved by the Engineer. In the case of the latter, the "kicker" shall be cast as an integral part of the foundation, footing or floor.

PSG 5.5.8 Curing and protection

PSG 5.5.8.1 Horizontal surfaces *

Horizontal and near horizontal surfaces shall be wet cured for a minimum of seven days from date of casting, and treated in accordance with Clause 5.5.8.

Other surfaces of the concrete shall be treated with a curing compound complying with PSG 5.5.8.3.

PSG 5.5.8.2 Formed surfaces *

In order to improve the effectiveness of the curing treatment, the specified minimum time for the removal of the formwork shall be four days.

PSG 5.5.8.3 Curing compound *

The use of membrane curing compounds will be allowed on vertical faces or steeply inclined faces (i.e. steeper than 45° to the horizontal) of cast in situ members of the structures subject to the Contractor producing sufficient, satisfactory cube crushing strength test results where the crushing strength of cubes which have been cured with the proposed curing membrane and left exposed to the elements are compared with those of an equal number of water cured cubes. The crushing strength of cubes cured with the proposed membrane shall be at least 85% of the crushing strength of the water cured cubes.

Before any membrane curing compound is used, each batch shall be tested on a trial surface to ensure that it forms a satisfactory membrane, and any compound which is unsatisfactory in the opinion of the Engineer, shall be rejected. Curing membranes will be disallowed if permanent discolouration of the concrete takes place. Surfaces where curing membranes are used shall be treated in such a manner that the final concrete texture and colour blends in with the rest of the concrete work. Furthermore, the Engineer shall, at his discretion, require the Contractor immediately to adopt an effective alternative means of curing any area of the structure to which a membrane has been applied which, in the opinion of the Engineer, is unsatisfactory. The curing compound used shall be to the approval of the Engineer. Wax based curing compounds will not be permitted.

The curing compound shall be applied immediately as formwork is progressively stripped or, in the case of unformed surfaces, when the concrete has taken its initial set. It shall preferably be applied by spraying and the rate of application shall be strictly in accordance with the manufacturer's recommendations. A method of monitoring the area to which curing compound has been applied and the application rate shall be as approved by the Engineer and rigidly applied by the Contractor.

Surfaces of joint rebates, where elastomeric sealant is to be applied, shall be protected from contamination by curing compound by the use of masking tape.

PSG 5.5.9.2 Hot weather conditions

No placing of concrete shall take place if the ambient temperature exceeds 32°C, or is likely to rise to above 32°C during the casting period or within eight hours after casting is completed.

PSG 5.5.10 Concrete surfaces

PSG 5.5.10.4 Screeded finish *

After placing and compacting, the concrete on a top (unformed) surface shall be struck off with a template to the designated grades and tamped with a tamping board to compact the surface thoroughly and to bring mortar to the surface, leaving the surface slightly ridged but generally at the

required elevation. No mortar shall be added, and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after the interfering aggregate has been removed or tamped.

PSG 5.5.10.5 Wood-floated finish *

Where wood-floating is ordered or scheduled, the surface shall first be given a finish as specified in PSG 5.5.10.4 Clause 5.5.10.1 and, after the concrete has hardened sufficiently, it shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screeding marks.

PSG 5.5.10.6 Steel-floated finish *

Where steel-floating is specified or scheduled, the surface shall be treated as specified in PSG 5.5.10.4 except that, when the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, the screeded surface shall be steel-trowelled under firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

PSG 5.5.11 Watertight concrete

The floor, walls and roof shall be considered to be watertight concrete and Clause 5.5.11 shall apply.

PSG 5.5.14 Defects

All defects shall be repaired as soon as possible after the formwork has been removed and the Engineer has inspected the concrete. A statement of the method to be used for each repair shall be submitted to the Engineer for his approval before any work is carried out. The Engineer may prohibit the further placing of concrete in the particular area concerned until he is satisfied that the repair has been satisfactorily executed.

PSG 6 TOLERANCES

PSG 6.2 Permissible deviations

Degree of Accuracy II shall apply except that abrupt changes in a continuous surface shall not be more than 3 mm.

PSG 7 TESTING

PSG 7.1.2 Frequency of sampling

One sample shall consist of three concrete test cubes.

For each sample taken the position in the structure shall be recorded where the batch represented by that sample is placed.

Sampling of concrete of a particular grade shall be as specified in Clause 7.1.2.

PSG 8 MEASUREMENT AND PAYMENT

PSG 8.1.2 Reinforcement

Notwithstanding the method of measuring and paying for reinforcement specified in Clauses 8.1.2.2 and 8.1.2.3, reinforcement will be measured and paid for as scheduled.

PSG 8.1.3.3 Concrete

The rates for concrete shall also cover:

- The use of dolomitic aggregate where prescribed.
- The cost of meeting the requirements of PSG3.
- The cost of the preparation of design mixes by an approved laboratory and submission for approval by the Engineer.
- The rates for blast furnace slag concrete shall also cover all costs in connection with the supply, storage, handling and mixing with cement, of blast furnace slag.
- The sequencing of concrete casting and backfilling against the outer walls, as specified in PSD5.2.3.2.

PSG 8.4.4 Unformed surface finishes

The rates for unformed surface finishes shall cover the cost of providing the respective surface finish as specified in PSG 5.5.10.

PSG 8.5 Joints

A provisional sum has been allowed for the supply and installation of joints for respective concrete works, to be claimed against proven cost on the basis of the provision of Engineering details / drawings for the procurement of the joints.

This sum shall cover the cost of all materials, labour and plant required to construct each type of joint specified on the drawings, including the cost of all shuttering, treatment of the joint as specified in Clause 5.5.7.3, the provision of chamfers as specified where concrete is exposed, as well as testing and repairing where necessary.

Non-designated (construction) joints will not be measured for payment, and the cost thereof will be deemed to be included in the rates for concrete.

PSG 8.9 Watertightness test *

The watertightness test will be paid by a lump sum separately for each structure.

The sum shall cover the cost of all labour, equipment and materials to carry out the tests to rectify faults and to achieve a test result to the satisfaction of the Engineer.

The sum shall include for all water required over and above that required for one filling of the water retaining structure.

PSMK KERBING AND CHANNELLING

PSMK 3 MATERIAL

PSMK 3.2.2 Nominal Lengths of Precast Units

Units laid to a radius of 1,0 m or greater shall be precast and shall have the following nominal lengths:

Radius in Plan	Nominal Length
1,0 m to 20,0 m	0,3 m
Greater than 20 m and straight	1,0 m

PSMK 3.3 Cast-In-Situ Concrete

Cast-in-situ concrete for curves less than 1 m and for transitions shall be 25 MPa / 19 mm.

PSMK 3.9 Bedding Material

Replace Subclause 3.9 with the following:

Bedding and backing for precast kerbs and channels shall be 15 MPa / 13 mm concrete to SANS 1200 GA, to the dimensions indicated on the Drawings.

PSMK 5 CONSTRUCTION

PSMK 5.13 Re-use of salvaged kerbs, channelling and edging

Where instructed by the Employer's Agent, the Contractor shall make re-use of salvaged kerbs, channelling and edgings.

PSMK 5.14 Expansion Joints in Kerbs and Channels

Provision shall be made in kerbs and channels for expansion joints of width at least 12 mm at intervals not exceeding 20 m. The concrete surfaces shall be primed and the joints filled with an approved sealant. Sealant for expansion joints in kerbing shall comply with the relevant requirements of SANS 110. Sealant for expansion joints in channels shall comply with the relevant requirements of BS 2499.

PSMM ANCILLARY ROADWORKS

PSMM 8 MEASUREMENT AND PAYMENT

PSMM 8.4 SCHEDULED ITEMS FOR ROAD MARKINGS

Add the following to MH 8.4.1:

PSMM 8.4.1 Non-reflectorised Paint Applied At Nominal Rate Of 0,42 £ /m² Unit: km or m²

Markings for parking bays shall be measured and paid for as "characters and symbols". No additional measurement and payment shall be made for "(e) Traffic island markings" and payment shall be made under the appropriate rates of payment item MM 8.4.1.

No additional payment shall be made for the pre-marking and/or dotting of lines or special markings and all relevant costs are deemed as covered by the tendered rates for MM 8.4.1.

PARTICULAR SPECIFICATIONS

3.4.2.1 PARTICULAR SPECIFICATIONS

SPECIFICATIONS FOR PIPELINE REPLACEMENT

This part of the Works Specifications contains specifications for pipeline replacement not covered by the Standard Specifications.

The number of each clause and each payment item in this part of the Works Specification is prefixed with a PS- to differentiate these clauses and items.

The following specifications are covered under this part of the Works Specifications:

PARTICULAR SPECIFICATIONS FOR PIPELINE REPLACEMENT

CONTENTS

PS-TA OVERPUMPING OR BYPASSING OF FLOWS

PS-TB CURED-IN-PLACE-PIPES (CIPP) LINING

PS-TC CCTV INSPECTION OF PIPELINE

PS-TD CLEANING OF PIPELINE

PS-TE SAND TRAPS AND SCREENING EQUIPMENT

ACCOMMODATION OF TRAFFIC SPECIFICATIONS – Section 1500 of the COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO SSRBW), applies amended by:

CONTENTS

E1500 AMENDMENTS TO COLTO SSRBW SECTION 1500: ACCOMMODATION OF TRAFFIC

The following SASTT Technical Standards for Trenchless construction works are Particular Specifications for this contract and are available from the Southern African Society for Trenchless Technology website www.sastt.org.za to download free of charge.

SASTT –TS-TT1:2010 Edition 1 Part TT1: Sliplining of pipelines

SASTT –TS-TT2:2013 Edition 1 Part TT2: Pipe bursting

SASTT –TS-TT3:2017 Edition 1 Part TT3: Horizontal directional drilling

PROJECT SPECIFICATIONS REFERRING TO PARTICULAR SPECIFICATIONS

CONTENTS

SASTT –TS-TT1:2010 Edition 1 Part TT1: Slip-lining of pipelines

SASTT –TS-TT2:2013 Edition 1 Part TT2: Pipe bursting

SASTT –TS-TT3:2017 Edition 1 Part TT3: Horizontal directional drilling

3.4.2.2 PROJECT SPECIFICATIONS REFERRING TO THE PARTICULAR SPECIFICATIONS

The following variations and additions to the Particular Specifications referred to in clause 3.4.2.1 apply to this Contract. The prefix PS indicates an amendment to the Particular Specifications. The letters and numbers following these prefixes respectively indicate the relevant Particular Specification and clause numbers to which the variation or addition thereunder applies.

PS-TA OVERPUMPING OR BYPASSING OF SEWER FLOWS

PS-TA 1 SCOPE

This particular specification covers the over-pumping of sewer flows that may be required to facilitate pipeline cleaning, CCTV inspections and pipe replacement.

PS-TA 2 GENERAL

The flow in the pipe can only be stopped without over pumping of sewer flows for short periods. Pumps and pipes **MUST** have the necessary capacity to drain the existing sewer without the upstream lines surcharging. Under no circumstances would overland flow of sewer be accepted and penalties will apply according to the Environmental specification in this document.

Odour control will have to be incorporated at all open sewer sections and temporary storage of material removed from the sewers, through micro-misting and deodorizing. During construction, the Contractor will take all precautions to avoid damage to sewer lines that may be caused by surcharging. Further precautions must be taken to ensure that the flow control operations do not cause flooding or damage to public or private property being served by the sewers involved.

The Contractors shall be solely responsible for the clean-up, repair, property damage costs, environmental damage costs and claims resulting from failure of the over-pumping system(s). If the downstream side of the portion of the line being upgraded/repared and where over-pumping system discharges into a manhole/ sump, becomes surcharged, an emergency link to the nearest stormwater system shall be provided. This measure is only intended for the event of an unforeseen emergency, during of which a catastrophic failure of the Contractors primary and standby over pumping system occurs. Under no other circumstances will sewage be allowed to discharge into the stormwater system or to flow in the open on the road sidewalk or verge systems.

Any accidental discharges must immediately be treated with an approved disinfectant and the affected area cleaned up in the manner approved by the Employer's Agent. All over-pumping activities shall adhere to the Construction Environmental Management Plan.

PS-TA 3 OVER PUMPING SYSTEMS

The Contractor shall submit an official over-pumping plan and method statement to the Employer's Agent for approval before any work may commence. The Contractor shall be held responsible for all Over-pumping and related activities. The Contractor shall also submit a detailed plan for the over-pumping of flows for each portion of works. The plan shall include:

- The time of commencement and time of completion
- Include the proposed location of pumping equipment, including plugs.
- Include all personnel responsible for over-pumping activities.
- The flow elevations to be monitored (Refer to Particular specification PS-TA 4 PLANT).
- State the flow rates, pump sizes, delivery pipe routes and delivery pipe capacities
- Provide pump type, brand, model and performance curves
- Include any traffic accommodation and noise suppression
- Public notification program

PS-TA 4 PLANT

The Contractor shall design an over-pumping plant for each system and obtain approval from the Employer's Agent prior to commencement. The over-pumping plant consists of the items located in or around the diversion manhole/ sump and mostly, but not entirely consists of the pumps, piping, isolating vales, non-return valves, screens, electrical power generators, electrical starting equipment, level controls, flow meters, flow data loggers, and lifting equipment. The contractor's plant design for each pumping system shall conform to the following requirements:

- Have sufficient capacity to handle full flow conditions of the incoming pipe(s)
- Have a back-up pump and generator ready (if applicable) available on site
- Silent pack Generators to be used or Alternative measures to reduce noise pollution
- Have adequate pump control and protection
- Pumps shall have a solid passing's capacity of not less than 75mm
- Incorporate a flow control/ monitoring system able to measure and keep history log of the pump flows, levels of the effluent in the manholes/ sumps that are connected to the main line (Upstream and Downstream) and house connection chambers (Erf chambers).

- Diesel pumps should be enclosed by sandbags to reduce noise pollution up to a height of 1.0m.
- Sufficient fuel shall be available on site for the pump(s) or other equipment or as agreed with the Employer's Agent. All pipes and equipment to be leak proof, under no circumstances shall leaking equipment be accepted.

PS-TA 5

CONSTRUCTION

For each of the above applications where over-pumping is required, the sewer sections shall be temporarily plugged and blocked upstream and downstream and the flow diverted by over-pumping without upstream surcharge of the sewer. The Contractor shall be responsible to isolate the rehabilitation/ work area from both upstream and downstream surcharge conditions.

The pumps, their related power supply and controlling systems (Including standby systems) shall be planned, designed and installed in such a way as to be easily maintained in order to mitigate the risk of power supply, structural, operational or mechanical failure in such a way that the risk of surcharging of the sewer system or over-flow and pollution is mitigated. All additional infrastructure, plant, material and labour required to effectively accommodate this functionality and accessibility of the over-pump system, shall be included in the tendered rates and designed/ signed off by a Professional Engineer.

The by-pass pipeline(s) for over-pumping shall be fully watertight. The Contractor's design and Method statements shall address contingencies in the event of equipment malfunction. Compensation for the design of the over-pumping system and all associated plans and approvals shall be included in the tendered rate and shall include all cost pertaining to labour, equipment and materials.

The over-pumping of the sewer rehabilitation will require HDPE rising mains to be laid above ground. Where road closures are not permitted the contractor shall construct a ramp and obtain approval from the Employer's Agent and from the local Road Authority in order to protect the pipe at road crossings. The design, sizing configuration, operating and maintaining of the over – pumping activities are the sole responsibility of the contractor. A detailed traffic accommodation plan shall be submitted and approved by the Employer's Agent before construction commences.

A responsible person shall be nominated to attend to the over-pumping operation and shall be in attendance for the duration of the over-pumping. A second responsible person shall continually monitor and record the flow levels at the upstream and downstream manholes as well as all connections and house connections chambers.

Warning must be given immediately should the pumps not cope with the inflow or malfunction of any equipment. The Contractor is obliged to immediately notify the Employer's Agent and report the steps to control the incoming sewer flow.

PS-TA 6

MEASUREMENT AND PAYMENT

PS-TA 6.1

OVER-PUMPING OR BYPASSING OF FLOWS

The Contractor shall perform over-pumping of the sewage flow. The sewage shall be over-pumped directly to another part of the sewerage system. No open channel flow or overland flow or discharging into the stormwater system is allowed. Over-pumping shall be paid for the actual hours of over-pumping as agreed with the Employer's Agent Representative prior to over-pumping taking place

Over-pumping

.....

Unit: h

The tendered sums shall include full compensations for designing, operating, and maintaining of over-pumping activities according to the over-pumping design plan submitted as well as the cost of removing the equipment and restoring the site to its original condition on completion, all in accordance with the relevant pipe sizes as indicated in the Schedule of Rates.

PS-TA 6.2

Extra over for provision of additional pipe when length exceeds 100m

Unit: m

Where the delivery pipeline exceeds 100m in length, an extra over payment will be applicable for the additional length of piping required for the over-pumping operation in accordance with the relevant pipe sizes as indicated in the Schedule of Rates.

PS-TB CURED-IN-PLACE-PIPE (CIPP) LINING

PS-TB-1 SCOPE

This particular specification covers the general construction requirements for the rehabilitation of pipelines by the installation of a resin impregnated flexible tube, which is pressurized and cured to form a tight fit against the existing pipe.

The lining shall provide a continuous smooth surface throughout the entire length of pipeline between manholes, with a neat fit to the internal wall of the host pipe.

The lining material shall have adequate abrasion and chemical resistance for the conveyance of raw sewage and shall be sufficiently strong to withstand the operation of cleaning equipment and high pressure water jetting during routine maintenance of the pipeline. The finished lining shall be free of wrinkles and other defects resulting from the release of thermal and/or mechanical stresses applied as part of the proprietary installation procedure.

PS-TB-2 SUPPORTING SPECIFICATIONS

This specification including but not limiting to references the following specifications:

UK Water Industry Specification

WIS 4-34-04: Specification for Renovation of Gravity Sewers by Lining with Cured-in-Place Pipes of March 1995.

WIS 4-34-02: Specifications for Glass Fiber Reinforced Plastic (GRP) Sewer Linings
WRc: Water research Centre, Sewerage Rehabilitation Manual, Volume 2, Edition 4

American Society for Testing and Materials

ASTM F1216-09: Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

ASTM D790: Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

ASTM D5813: Standard Specification for Cured-In-Place Thermosetting Resin Sewer Piping systems

ASTM D638: Standard Test Method for Tensile Strength of Plastics

PS-TB-3 INTRODUCTION

The rehabilitation shall be carried out using the Cured in Place Pipe (CIPP) technology, consisting of the installation of a resin-impregnated flexible tube shaped tightly to the original internal surface of the existing pipe, followed by a curing process based on hot water, steam or ultraviolet light, in accordance with the technical requirements stipulated hereinafter. The final product shall extend the entire length of sections from manhole to manhole providing a continuous, tight-fitted, water-tight, corrosion resistant and structurally safe pipe.

PS-TB-4 GENERAL APPROACH

PS-TB-4.1 Proprietary System

This particular specification is a general specification for the Cured-in-Place-Pipe lining of pipelines. Cured-in-Place-Pipe systems are normally proprietary systems that have been developed by specialist manufacturers and installers. The Contractor shall use an approved system in accordance with this specification and in accordance with the approved Standards, Specifications, Codes and/or Method Statements of the manufacturer and installer. The specified lining system shall meet the specified structural and hydraulic performance specification. The Contractor shall be required to furnish written confirmation of compliance of the materials, manufacture, methods or installation

Given that the pipelines to be rehabilitated are in service, the cleaning, pipe preparation and relining works will have to be carried out in a sequential basis, one section of pipeline at a time comprised between manholes. It is envisaged that in order to enable the satisfactory execution of the impregnated tube insertion procedure, some sections of the pipeline subjected to continuous excessive and sometimes localized infiltration will require sealing of leaking pipe joints and/or installation of a pre-liner which is installed within the host pipe, before inserting the impregnated liner tube to prevent contamination of the uncured resin by excessive groundwater infiltration.

PS-TB-4.2**Work Sequence**

- Applying and obtaining construction wayleaves. Refer to list provided by the Employer's Agent / Client.
- Liaison with Employer's Agent for diversions of each section of pipeline.
- Coordination with the Employer's Agent to notify the residents with house connections in the section of pipeline to be rehabilitated to stop discharging until such a time as that section of pipeline has been relined and the house connections have been repaired and reconnected.
- Implementation of traffic control measures for the work area and road crossings where required.
- Implementation of temporary by-pass around the section of pipeline to be rehabilitated.
- Plugging of pipe inlet(s) of upstream manhole and installation of pumping equipment and temporary flow diversion main and starting of by-pass pumping.
- Cleaning of section of pipeline.
- Procuring and supplying the correct material for the CIPP (pre-liner and main structural line)
- Procuring all plant
- Installation of step irons and manhole restoration as stated in the contract.
- Cleaning of section of pipeline and removal of obstructions, including cutting of protruding house connections
- Removal from site of liquid and solid wastes from cleaning operations in accordance with the approved environment management plan
- CCTV inspection of the cleaned and prepared pipeline under over-pumping conditions
- Installation of the cured in place relining system in accordance with this specification
- Collection of CIPP sample(s) for testing and CCTV inspection
- Reinstatement of connections and lateral branches in accordance with this specification
- Acceptance of finished section or implementation of remedial actions if required.
- Removal of plug at upstream manhole, removal of by-pass pumping equipment and pipes and restoration of service to house connections.

The restorations of manholes to be completed before CIPP installation commences and damages to manholes to be repaired upon completion.

PS-TB-5**MATERIALS****PS-TB-5.1****The Tube**

The tube shall consist of one or more layers of flexible needled felt or an equivalent non-woven or woven material or combination thereof, compatible with the resin to be used and capable of withstanding the installation pressures and curing temperatures inherent to the proprietary procedure, as well as the long-term loading requirements. The tube shall be capable to fit irregularities and out-of-roundness of the existing pipeline. To ensure close fit of the finished product to the host pipe wall, the Contractor shall make allowance for circumferential stretching during the inversion process. The wet out tube shall have a relatively uniform thickness so that when compressed at installation pressures will not be less than the calculated minimum design wall thickness.

The fabric tube shall have an impermeable and flexible membrane that will contain the resin and facilitate vacuum impregnation and monitoring of the resin saturation during the wetting-out procedure. If the liner is to be inverted, the exterior wall will become the interior wall of the finished CIPP after inversion. The wall colour of the internal finished surface of the CIPP shall be a relatively light reflective colour, so that a clear examination via a CCTV inspection may be carried out effectively. The lining tube shall be manufactured to a size that when installed will fit the internal circumference and length of the host pipe. The seams in the lining tube shall be stronger than the un-seamed tube.

The tube must be calibrated per metre and the meterage numerals must be visible at or about the crown of the new pipe once installed into the host pipe.

PS-TB-5.2**Resin**

The resin system shall be a thermoset corrosion resistant polyester or vinyl ester system including all required catalysts, or an epoxy resin and hardener that is compatible with the insertion process so that when cured within the tube create a composite that satisfies the requirements of ASTM F1216 and ASTM D5813, the physical and chemical properties specified herein, and those which are to be utilized in the submitted and approved design of the CIPP as described in a subsequent

section of this specification. The cured resin shall form a hard impermeable material. The resin must be thermal or UV setting, to be cured in the presence of water or steam.

PS-TB-5.3 Calcium Aluminate Mortar (Manhole Rehabilitation)

The mortar for manhole rehabilitation must be 100% calcium aluminate mortar and be able to withstand biogenic corrosion.

PS-TB-6 DESIGN

The CIPP Liner shall be fabricated from materials which, when cured, shall be able to withstand internal exposure to and the corrosive effects of normal sewerage effluent liquids and gasses containing hydrogen sulphide, carbon monoxide, carbon dioxide, methane, dilute sulphuric acid, and exposure to soil bacteria and chemical attack which may be due to materials in the surrounding ground or sewerage within it.

The lining shall be designed to meet the specified structural and hydraulic performance requirements of the lining. Forms stating the relevant parameters and design methods are provided with this specification and the contractor shall provide the required parameters and design. Should the Contractor find that any part of the design parameters differ on site to those stated in the tender (e.g. host pipe diameters), he shall report it immediately to the Employer's Agent. The Employer's Agent shall review the implications and may instruct the Contractor to submit revised design calculations based on revised design parameters. The Employer's Agent shall check the revised design calculations and may approve any dimensional changes to the liner prior to ordering. The performance of the installed lining shall be measured against the tendered designs for compliance.

PS-TB-7 STRUCTURAL DESIGN REQUIREMENTS

PS-TB-7.1 Overview

The Cured-in-Place-Pipe liner shall conform to the following minimum initial structural properties.

PS-TB-7.3 Liners

Alternative pay items have been included for reinforced and un-reinforced liners.

Un-reinforced liners shall comprise one or more layers of absorbent woven or non-woven polyester fabric or felt. Reinforced liners shall comprise one or more layers of absorbent woven or non-woven glass fibre.

Since reinforced liners are generally stronger than un-reinforced liners, reinforced liners have also been scheduled. The minimum structural properties for reinforced and un-reinforced CIPP liners are stipulated as follows:

	<u>Minimum Values</u>	
<u>Structural Property</u>	<u>Un-reinforced Liner</u>	<u>Reinforced Liner</u>
Short Term Modulus of Elasticity	1 725 MPa (ASTM F1216)	7 000 MPa
Short Term Flexural Strength	31 MPa (ASTM F1216)	100 MPa

PS-TB-8 PRE-CONSTRUCTION/ PREPARATION AND CONSTRUCTION

PS-TB-8.1 Pre-Construction

The Contractor shall clean the pipeline with jetting equipment to remove silt, debris and loose pipe material. Care shall be exercised that excessive pressures do not damage the pipework.

The pipeline shall also be inspected by CCTV camera to confirm all debris has been removed. The Contractor shall use a pipe scraper, cutter, borer or pig to ream the pipe to remove excessive hard deposits on the pipe wall and ensure the bore of the pipe is of adequate size to accommodate the lining

PS-TB-8.2 Preparation

The Contractor shall verify all lengths and host pipe internal diameters on site prior to the ordering of the lining tube. Individual installations runs may be made through one or more manholes as determined on site by the Contractor and approved by the Employer's Agent. The impregnation or wetting-out of the liner with resin shall take place in controlled factory conditions.

The volume of resin used shall be sufficient to fill all voids in the tube material and the volume shall be adjusted for the change in resin volume due to polymerization, to allow for any migration of resin into the cracks and joints in the host pipe (in sections not protected with a pre-liner) and attain the Design Thickness specified. The lining shall be transported and stored in a manner to ensure that there is no damage or premature curing of the lining. The Contractor to submit all the planned preparatory arrangements to the Employer's Agent for approval at least 7 days prior to commencing any lining.

The Contractor shall:

- Ensure all wayleaves obtained, maintained and adhered to
- Traffic accommodation plans have been submitted and approved by the Employer's Agent and local authorities.
- Public has been notified and kept up-to-date with the construction proses
- Ensure that all manholes, insertion and winching pits are adequately sized and conditioned to accommodate the necessary operations.
- Have confirmed arrangements with the relevant authorities for road closures, traffic deviations and traffic control
- Confirm that all necessary safety equipment, safety measures and personnel are in place.
- Confirm that all flow deviations measures and over-pumping equipment are ready. The contractor shall confirm that all service connections have been identified, plugs provided and tested and owners forewarned.
- All service connections have been identified, plugs provided and tested and owners forewarned
- Provide the Employer's Agent with a detailed programme for the lining operation, including cleaning, CCTV inspections, profiling inspections of existing host pipe, over-pumping and the lining process itself and showing time of commencement and time of completion
- Provide details to the Employer's Agent of the curing schedule including the planned times, temperatures, pressures and rates of application of the curing medium. Curing equipment and temperature monitoring system details.
- Make all necessary arrangements to obtain access to high residential buildings to install the liner

Prior to the installation of the lining system in a given section of the pipeline, all preliminary preparation works shall have been completed including rectification of protruding service connections, sealing of major leaks, trenchless and excavated point repairs and preliner installation where required

PS-TB-8.3 Construction

PSA-TB-8.3.1 Lining

The Contractor shall install the approved lining system in accordance with this specification and in accordance with the approved Standards, Specifications, Codes and/ or Method Statements of the manufacturer and installer. This would include the insertion of the liner, its pressurization using a hydrostatic head, air pressure or other approved method and curing. This shall include any necessary over-pumping of flows and all work necessary to fit and trim the linings through manholes. Care shall be taken to avoid over-stressing the fabric/ liner.

The use of lubricant may be allowed to reduce friction during installation. The lubricant shall be a nontoxic, oil-based product that has no detrimental effect on the liner, does not support bacterial growth or affect the general characteristics of the domestic sewer. Care should be exercised during filling and emptying of the pipeline, to avoid causing a vacuum that could damage the new liner. If the lining fails to make a tight seal at the manhole walls, the contractor shall apply a resin mixture seal at that point. The resin seal shall be compatible with the resin mixture of the lining.

Following preparation of the site and pipeline installation, curing and cool-down of the CIPP lining shall be carried out in a continuous operation in single lengths between contiguous manholes. The Contractor shall make the necessary arrangements to ensure that no water circulates in the section of pipeline being relined during installation and curing. The installation, curing, cooling-down and testing procedures shall meet the requirements of ASTM F1216-09 for direct inversion lining technology. The Contractor shall be solely responsible for the suitability of the proprietary installation, curing and cooling down procedures to the particular characteristics and condition of each section of the pipeline.

Once a complete section of relining tube is installed it shall be cured through the use of circulating heated water, introduction of steam or application of ultraviolet light, under carefully controlled conditions via installation of a temperature monitoring system. The Contractor shall be responsible for the post-installation cleaning of the entire section of relined pipe and safe disposal of any residual water from the installation, pressurising and curing operations in accordance with its Construction Environmental Management Plan.

PS-TB-8.3.2 Rehabilitation of Existing Manholes

The Contractor must inspect each manhole for any leaks and structural damages and report to the Employer's Agent for remedial action. The contractor shall:

- Remove the existing step irons and install new Copolymer Polypropylene covered step irons (Same Colour) in existing manhole chambers before cleaning or lining
- Ensure that the surface is clean of any loose debris
- Apply a 20 mm thick (finished thickness) coat of 100% calcium aluminate mortar. The mortar shall be able to withstand biogenic corrosion.
- The manhole should have a smooth finished surface.

PS-TB-8.3.3 Service Connections

The Contractor shall reinstate all the house connections in each finished section of pipeline utilizing a remotely controlled cutting device, monitored by a CCTV. The cutting tool shall leave a smooth bevelled edge free of any protrusions that shall be flush with the inside surface of the branch pipeline. There shall be no discontinuity between the lining material at the cut hole and the branch pipeline. The services shall be restored to not less than 90% of their original capacity and shall be free of any sharp edges or protrusions, which could cause paper, rags or debris to accumulate.

The Contractor shall allow sufficient time for any movement of the installed lining relative to the host pipe before carrying out the cut outs. This shall include movements caused by shrinkage, thermal contraction, stress recovery, mechanical adjustment in material properties during curing, or any other action.

Following acceptance testing, the Contractor shall coordinate with the Employer's Agent to notify the affected community that the service has been restored.

PS-TB-9 TESTING, INSPECTION AND ACCEPTANCE

PS-TB-9.1 Inspection

The cured pipeline shall be inspected by CCTV and a DVD recording made in the presence of the Employer's Agent. The lining shall be continuous over the entire length lined and shall have no deformations (except in sympathy with defects in the existing pipe), twist, wrinkles, foreign inclusions, dry spots, lifts, pinholes or delamination's. The pipe shall be free of leaks and defects that will affect the integrity or strength of the lining. The contractor shall rectify all defects before the lining is accepted. The Employer's Agent may instruct the Contractor to re-allow the flow through the pipe. This may be necessary before the Contractor shall rectify all defects. Any remedial work that the Contractor cannot perform immediately will have to be scheduled at another time. The Contractor shall perform any work required to remedy any defects in the lining at his own cost.

PS-TB-9.2 Testing

Upon completion of each section of the pipeline the following inspection and testing procedures will be carried out:

- CCTV survey and reporting
- Two samples per lining operation shall be fabricated from material taken from the actual lining used and prepared in accordance with Clause 8.1.2 of ASTM F1216. Five specimens from the sample will be used for the determination of Short-term Flexural (Bending) Properties in accordance with Clause 8.1.3.1 of ASTM F1316.
- CIPP wall thickness shall be measured in accordance with Clause 8.6 or Clause 8.6.1 of ASTM F1216. The Cured-in-Place-Pipe samples shall be prepared for each lining operation. The samples shall be from the actual lining installed.
- The samples shall be large enough to provide a minimum of five specimens for flexural testing.
- After curing, the samples shall be submitted to an independent testing laboratory to meet the requirements submitted in the tender document or agreed upon with the Employer's Agent.
- The independent laboratory shall also measure the wall thicknesses of the samples. The minimum wall thickness at any point shall be not less than 87.5% of the design thickness.

PS-TB-9.3 Acceptance

Acceptance of each completed section of CIPP rehabilitation or CIPP Point repair rehabilitation will be conditional to compliance with the following requirements:

- Satisfactory compliance with minimum short-term flexural properties based on the results of tests established in Section PS-TB 9.1 of this specification
- Thickness of finished lining not less than 87.5% of thickness nominated by the Contractor as the basis for structural calculations, based on results of measurements as per Section PS-TB 9.1 of this specification
- The finished relining system shall be free of defects that may be detrimental to its long term structural and/or hydraulic performance, including but not limited to:
 - Dry spots, bubbles, cracks or delamination
 - Wrinkling of the lining (fins) with height exceeding 2.5% of the internal diameter of the host pipe, where not attributable to defects on the host pipe
 - Visible leakage through any part of the lining, including reinstated house connections
 - Inadequate sealing of the lining at manholes or points of entry of house connections
- In addition to the physical properties testing and post-installation CCTV survey, the Contractor shall deliver a certified copy of the curing report for each lined section, from the temperature monitoring system used of curing process.

In case of non-compliance with any of the above acceptance requirements, The Contractor shall undertake the necessary remedial actions to achieve compliance and will submit to the approval of the Employer's Agent the proposed methodology and program of works for the completion of the corrective actions.

PS-TB-10**MEASUREMENT AND PAYMENT**

The Cured-in-Place-Pipe lining method of pipe lining has been specified, whereby a resin impregnated flexible tube is inserted into the pipeline, pressurized and cured from to form a tight fit against the existing pipe. This is normally accomplished from existing manholes. During the installation of the liner, over-pumping of flows will be required. Prior to the installation of the liner the pipeline shall be cleaned of all debris and shall be inspected by CCTV inspections.

PS-TB-10.1**Supply and Install Cured-in-Place-Pipe Liner**

<u>Item</u>	<u>Unit</u>
Supply and Install Cured-in-Place-Pipe Liner	
Host pipe Nominal Diametermm Liner Thickness mm m	

Those sections of pipeline to undergo cured-in-place-pipe lining are to be isolated using plugs or stoppers by the Contractor to the satisfaction of the Employer's Agent. The Contractor will have to deal with any infiltration of ground water into the isolated section of the pipeline. The cost of isolation sections of the pipeline and dealing with infiltration water is deemed to be included in the rates of cured-in-place-pipe lining.

The Cured-in-Place-Pipe liner shall be measured on the actual length of lined pipe including manhole benching. Separate items shall be scheduled for each nominal diameter of the host pipe and design thickness. The Price tendered and paid shall include full compensation for the cost of manufacturing, supply and installing the liner, curing, sealing at the manholes, insertion pits, final cleaning of pipelines, CCTV inspections, testing, safety measures, all supervision, labour materials, transport, equipment and incidentals required to reline the host pipe. Seventy five percent (75%) of the payment for Cured-in-Place-Pipe lining will be made once the liner has been successfully installed and inspected by CCTV. The remaining twenty five percent (25%) of the payment will be made once the liner has passed all tests and has been accepted and approved by the Employer's Agent. Service reconnection shall be measured and paid for separately.

PS-TB-10.2**Robotic cutting for service reconnections**

<u>Item</u>	<u>Unit</u>
Robotic cutting for reconnections (all sizes)	No.

The robotic cutting for reconnections shall be paid for each pipe connection that is re-established by cutting a hole in the Cure-in-Place-Pipe liner using a robotic cutter. The rate shall apply to all pipe sizes and include full compensation for the cost of establishment, de-establishment, providing and operating all equipment including robotic cutters and CCTV camera and including recovering of the waste material.

PS-TB-10.3**Rehabilitation of Existing Manholes**

<u>Item</u>	<u>Unit</u>
20mm calcium aluminate mortar to internal faces	m2
Installation of Step irons 	No.

The unit measured for step irons shall be the number of step irons installed.

The unit rate for plastering and sealing of the manhole chambers shall be per square meter of the chamber.

The tendered rate shall include full compensation for plastering and providing proper access to all manhole chambers in compliance with the OHS Regulations. In addition, the rate shall also cover the cost of cleaning and applying a 20mm 100% calcium aluminate mortar to all concrete surfaces within the manholes.

PS-TB-10.4**Extra-over items for fluctuation in exchange rate**

<u>Item</u>	<u>Unit</u>
Extra-over items for fluctuation in exchange rate	Prov Sum

The sum will compensate for the fluctuation (upwards or downwards) in the exchange rate. This will only apply to the liner costs. The sum will be calculated on the exchange rate at tender closing (rate quoted by Council's main banker ABSA) and date of placing the order for the specific works

project. The data entered on Schedule 21 – Price Basis for Imported Resources by the Contractor at tender stage will be used in the calculation described in Contract Data Clause 6.8.5. Tenderers must submit proof of placing order for the specific works project. The order and invoice must make specific reference to the specific works project for which the liner is imported.

PS-TB-10.5 Extra-over items for installation of CIPP liners in mid-blocks

<u>Item</u>	<u>Unit</u>
Extra-over items for installation of CIPP liners in mid-blocks	m

The rate must cover all the associated costs and effort for installation of liners in a midblock sewer system.

PS-TB-10.6 Robotic cutting of protruding laterals

<u>Item</u>	<u>Unit</u>
Robotic cutting of protruding laterals	
a) less than or equal to 200 mm diameter	No.
b) larger than 200 mm diameter	No.

The cutting of protruding lateral connection pipes into the main pipe shall be paid for each protruding pipe that is cut and removed using a robotic cutter. The rate shall include full compensation for the cost of establishment, de-establishment, providing and operating all equipment including robotic cutters and CCTV camera and including recovering of the waste material.

PS-TC CCTV INSPECTION OF PIPELINES

PS-TC 1 SCOPE

This particular specification covers the inspection of pipelines using closed-circuit television (CCTV). The inspections and assessments are those necessary when pipelines are replaced or newly installed to ensure quality of workmanship and construction materials.

PS-TC 2 GENERAL

The CCTV system shall be used for:

- The monitoring of the pipeline after cleaning
- Making a recorded inspection of the pipeline prior to repair/ replacement/ lining.
- Making a recorded inspection of the pipeline after repair/ replacement/ lining.
- Manhole inspection with incoming and outgoing pipeline when required by the Employer's Agent.
- Or as instructed by the Employer's Agent.

PS-TC 3 PLANT

The CCTV System shall comprise at least of:

- A Remote controlled robot camera and self-propelled tractor.
- The tractor shall have an adjustable gantry to set the height of the camera to the centre of the pipe.
A skid-mounted camera shall be acceptable.
- The tractor shall carry adequate lighting equipment
- A High resolution colour monitor with minimum of 470TVL.
- Camera with ability to pan and tilt 360°
- A suitable device to store data
- An Integral distance recording on the image
- The Camera must have at least 10x optical zoom.
- The camera shall have sufficient lighting to illuminate the pipeline being surveyed to produce a good clear image.
- The equipment that enters the manhole and pipelines shall be waterproof and comply with the safety requirements concerning the presence of explosive gasses.

PS-TC 4 INSPECTION

The system shall be able to provide a live, high resolution color image that can be viewed and recorded at a nearby location. The recordings shall be accompanied by a log giving all relevant details of the inspection. The Contractor shall implement all the necessary safety measures and isolation of pipelines or over-pumping of pipe flows.

The log shall identify:

- Cracks and fractures
- Deformed, collapsed and broken pipes
- Dropped inverts
- Displaced and open joints
- Internal surface damage
- Debris and silt
- Obstructions
- Infiltrations

Manholes must be inspected for all defects, confirmation of pipe material and pipe sizes for all incoming and outgoing pipes. All the pipes shall also be inspected by CCTV up to a length of 3 metres from the manhole for all pipes. Photographic evidence of the manhole condition must also be submitted to the Employer.

PS-TC 5 ACCEPTANCE

After the line has been installed and cleaned, a CCTV camera inspection shall be made in the presence of the Employer's Agent and the recording/ CCTV footage and the log thereof shall be handed to the Employer's Agent.

PS-TC 6 MEASUREMENT AND PAYMENT

The initial CCTV inspection to assess the condition of the pipeline shall be paid separately. Payment for the CCTV inspections undertaken for the pipe replacement operation shall be included in the related pipe replacement pay items. Payment for the final CCTV inspection shall be included in the rates for joint sealing, pipe lining or repair. Any necessary isolation of the pipeline and necessary over-pumping activities shall be paid for separately.

PS-TC 6.1 CCTV INSPECTION AND ASSESSMENT

Pipes shall be inspected using CCTV camera inspections to assess their condition prior to rehabilitation being undertaken. The Contractor shall provide a recording of the CCTV inspection in video format and the condition of the pipes are to be assessed and reports produced using the WinCan or similar approved system.

The Employer's Agent may require the Contractor to undertake CCTV Inspections of other pipes.

CCTV Inspection and Assessment Unit: m

The unit of measurement shall be linear metre of pipeline being measured Centre to Centre of adjacent manholes or to the stopping point whichever is applicable. Separate items have been scheduled for different ranges of pipe diameters.

The rate shall include full compensation for CCTV inspection and assessment as well as profiling of the existing host pipe including camerawork, provision of inspection reports and recordings. Should the Employer's Agent not accept the CCTV inspection due to visual clarity or quality, the Employer's Agent will issue a written instruction to the Contractor who will be required to redo the CCTV inspection at his own cost.

PS-TC 6.2 MANHOLE INSPECTION

Manhole Inspection Unit: No.

For manhole inspection, the unit of measurement shall be per number (No.) of manholes inspected. The rate tendered must include for all costs for locating the manhole, assessing the condition of the manhole, compiling photographic evidence of the manhole, conduct CCTV inspection up to a length of 3 m in all incoming and outgoing pipes, confirming the pipe material and pipe size. It must be assumed that all manholes will have three (3) incoming pipes and one (1) outgoing pipe.

PS-TC 6.3 INSPECTION ESTABLISHMENT

CCTV Site Inspection establishment Unit: Day.

The Contractor will be paid for the establishment of the CCTV equipment in the area/suburb specified by the Employer's Agent. The Contractor will be paid for that establishment in the area/suburb for the day or part thereof.

PS-TD CLEANING OF PIPELINES

PS-TD 1 SCOPE

This particular specification covers the general requirements regarding the cleaning of sewer and stormwater pipelines in preparation for the extension/replacement/ CCTV inspection/ lining of pipelines.

PS-TD 2 GENERAL

The thorough cleaning of pipelines is an essential prerequisite for the successful extension/replacement/ CCTV inspection/ lining of pipelines. This specification is aimed at those pipelines that preclude man entry. It is expected that the cleaning will be performed in conjunction with a simultaneous CCTV camera inspection to monitor performance and progress.

PS-TD 3 SUPPORTING SPECIFICATIONS

Sewer Jetting Code of Practice WRc 1st Edition April 1997

PS-TD 4 PLANT

The contractor may use any of the following cleaning methods, to suit the particular conditions of the section of pipe:

- High velocity jet cleaning equipment shall have a selection of two or more high velocity nozzles capable of producing a scouring action from 15 to 45 degrees.
- Mechanically powered equipment shall be used for cleaning of debris, incrustations and obstacles that cannot be removed by any other above methods.

PS-TD 5 DESIGN

The contractor shall submit a method statement for cleaning the pipeline.

PS-TD 6 CLEANING

PS-TD 6.1 Cleaning Operation

The following criteria should be met at all times when the cleaning of the pipelines is done:

- All silt and debris must be removed completely.
- Care to be taken when high pressure jetting cleaning is used to avoid further deterioration of the pipeline(s), creation of sink holes or pipe collapses.
- All foreign material such as rags, fats, bacteriological slimes, roots, soft encrustations and grease shall be removed.
- Intruding or protruding connections, encrustations such as calcium carbonate, the residual crust of corroded pipe wall and other hard deposits should be removed by mechanical or high pressure water cutter equipment.
- All loose fragments of pipe that may foul the insertion of the lining shall be removed.
- The Contractor shall implement all the necessary safety measures.
- The Contractor shall implement any necessary over-pumping of flows.

PS-TD 6.2 Disposal of Material

All material shall be collected by means of a sand trap, weir or dam in the downstream manhole and the debris shall be removed from the pipeline. The contractor shall remove and dispose of all solid waste generated as part of the pipe preparation at the ASHTON solid waste facility, Asbestos material is to be disposed of at the private "Vissershok Waste Management Facility (Pty) Ltd", Frankdale Road, Milnerton which is situated off the N7 on the Frankdale Road. Any contaminated liquid wastes shall be disposed of in accordance with the approved construction environmental management plan. The contractor shall implement any necessary over-pumping of flows.

PS-TD 6.3 Removal of Obstructions by Point Repairs

If an obstruction is encountered which cannot be removed by methods operating within the pipe it shall be pointed out to the Employer's Agent. The Employer's Agent may instruct the contractor to excavate down from the surface and remove the obstruction and repair the pipe. The excavation shall be backfilled and the road reinstated according to the specification given by the Employer's Agent in this document.

PS-TD 6.4 Root Removal

Cleaning of some pipes may require the removal of roots. Any root cutting must be reported to the Employer’s Agent prior to commencement. The Contractor must have and use suitable root cutting/removal equipment. It must be anticipated that both root cutting equipment and high pressure jetting will be required. In certain circumstances, with the Employer’s Agent’s approval, it may be more economical to remove the roots by open excavation.

PS-TD 7 INSPECTION

After the pipeline has been cleaned and prior to the pipe being repaired, a CCTV camera inspection shall be made in the presence of the Employer’s Agent’s Representative and the video recording thereof shall be provided in a suitable format to the Employer’s Agent. The acceptance of the pipeline cleaning will be based on the extent of the CCTV inspection. The Employer’s Agent may request the Contractor to redo the entire or portions of the pipeline if the CCTV footage illustrates non-compliance with any of the criteria under PS-TD 6.1 at no additional cost. The cleaning of the pipeline and CCTV inspection would be repeated till the Employer’s Agent is satisfied that the pipe has met all criteria under PS-TD 6.1.

PS-TD 8 MEASUREMENT AND PAYMENT

The bulk cleaning of pipelines shall be measured and paid for separately for the different ranges of pipe diameters.

PS-TD 8.1 BULK CLEANING

Bulk Cleaning Unit: m

The unit measured shall be linear metres of the pipeline cleaned. Separate items have been scheduled for different ranges of pipe diameters.

The rate tendered shall include full compensation for the establishment, de-establishment, provision of equipment, bulk cleaning of pipelines, including associated CCTV inspections and the removal of cleaned material from the pipeline.

Removal of cleaned material, transport to and disposal at Vissershok private landfill site Unit: ton

The unit measured shall be per metric ton of solid waste transported and disposed at the Vissershok Private Landfill site.

The rate shall include the dewatering to the moisture content allowed by the landfill site. Payment shall be based on the official receipts of the landfill site as proof of the proper disposal and the quantity of waste disposed.

The cost for the cleaning of pipelines during any repairs as well as the final cleaning after completion of the repairs is considered to have been included in the rates.

PS-TD 8.2 ROOT REMOVAL

Cleaning of some pipes may require removal of roots. The Contractor must have and use suitable root cutting/ removal equipment. It must be anticipated that both root cutting equipment and high pressure jetting will be required. In certain circumstances, with the Employer’s Agent’s approval, it may be more economical to remove the roots by Open excavation. Any root cutting must be reported to the Employer’s Agent prior to commencement.

Root cutting and removal Unit: m

The root cutting and removal operation has been measured per metre for differing pipe diameters. The rates are to include for transport and disposal in accordance with the Environmental Management plan.

PS-TE SAND TRAPS AND SCREENING EQUIPMENT

PS-TE 1 SCOPE

This particular specification covers the supply and installation of sand traps and screening equipment, and various associated elements of a possible installation – to be designed for Construction at the time of issuing of Work Packages.

PS-TE 6 MEASUREMENT AND PAYMENT

PS-TE 6.1 COVERS

The Contractor shall supply and install manhole covers and frames to the associated sand traps and screening facility. Prices should be provided for multiple manhole frame and cover types and materials, as provided in the Schedule.

Manhole covers and frames..... Unit: No

The tendered sums shall include manufacture, supply, delivery and installation of the associated manhole covers and frame.

PS-TE 6.2 CHAMBER COATINGS AND LININGS

The Contractor shall supply and install corrosion protection coatings and linings to the associated sand traps and screening facility structures. Prices should be provided for multiple types of coatings and linings, as provided in the Schedule.

Chamber coatings and linings..... Unit: kg or m²

The tendered sums shall include supply and installation the selected chamber coating and/or lining.

PS-TE 6.3 SCREENING EQUIPMENT

The Contractor shall supply and install screening equipment for the associated sand traps and screening facility. A provisional sum has been allowed for in the Schedule for the flexibility of specifying any size or spec of manual front rake screen and associated appurtenances.

1) Manual front rake screen, including associated fittings, rake and any other items required to complete the installation as deemed necessary by the Engineer..... Unit: Prov Sum

2) Handling costs in respect of Item (1) above..... Unit: %

The tendered sums shall include manufacture, supply, delivery and installation of the associated fittings, rake, and manual front rake screen.

PS-TE 6.4 ISOLATING VALVES AND SLUICES

The Contractor shall manufacture, deliver, install and commission plate stops and penstock, including all ancillary fixing requirements as per manufacture's detail. Grade 316 Stainless Steel material of construction. A provisional sum has been allowed for in the Schedule for the flexibility of specifying any size or spec of isolating valves and associated appurtenances.

1) Isolating valve (of varying types allowed in Schedule (or similar approved)) Unit: Prov Sum

2) Handling costs in respect of Item (1) above..... Unit: %

The tendered sums shall include manufacture, supply, delivery and installation of the associated isolating valves and sluices.

ACCOMMODATION OF TRAFFIC SPECIFICATIONS

This part of the Works Specifications contains specifications for Accommodation of Traffic not covered by the Standard Specifications.

The number of each clause and each payment item in this part of the Works Specification is prefixed with an E to differentiate these clauses and items.

The following specifications are covered under this part of the Works Specifications:

AMENDMENTS TO SECTION 1500 OF COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (COLTO SSRBW): ACCOMMODATION OF TRAFFIC

SECTION E1500 : ACCOMMODATION OF TRAFFIC

E 1502 GENERAL REQUIREMENTS

(a) Safety

The following shall be added to Clause 1502(a) of the Specifications:

All construction workers shall wear high visibility safety clothing when working alongside public traffic. The safety jackets shall be of an approved Level 2 type, bright/fluorescent orange, red-orange or yellow in colour with retro-reflective strips as indicated in Chapter 13 of Volume 2 of the South African Road Traffic Signs Manual (SARTSM). When work is carried out between the hours of sunset and sunrise, the Level 2 safety jackets shall be replaced by level 3 jackets.

(i) Traffic safety officer

Add the following to sub-subclause (iii):

Should a Traffic Safety Officer be required for the "Works Project", the officer shall patrol and inspect the reference and location of each temporary traffic-control facility on the whole site of works twice each day, to record all irregularities discovered and the remedial action taken, and to sign off as correct for submission to the Employer's Agent on the date / reference / location record sheets. The traffic safety officer shall keep a duplicate book for this specific purpose.

The traffic safety officer shall submit to the Employer's Agent by 10h00 each morning, a record of all matters pertinent to site safety and traffic accommodation throughout the site of works the previous day. He shall also record the daily labour returns of flagmen, stop/go and traffic signal control staff employed.

Add the following:

The Contractor shall provide the traffic safety officer with the necessary resources, inter alia a light delivery vehicle (LDV), a cellular telephone, warning signs and rotating amber flashing warning lights and at least two (2) personnel. The LDV shall be equipped with high visibility front and rear panels. The legend CONTRACTOR'S TRAFFIC CONTROL in visible fluorescent and/or retro-reflective materials of letter height of at least 175 mm shall be displayed prominently on front and rear sign panels on the LDV. The LDV shall be equipped with a rotating amber flashing warning light with a minimum intensity of 100W. The warning light shall be switched on at all times and the front and rear sign panels shall be displayed when the LDV is used on the site. The traffic safety officer, his vehicle, equipment and personnel shall also be available 24 hours per day on all non-working days/hours.

During non-working days or periods, the Contractor's traffic safety officer will be required to patrol and ensure that all temporary traffic-control facilities are in place and functional. The accommodation of traffic team will be required to be on standby.

The provision for the traffic safety officer, his vehicle, equipment, the cost of his cellular telephone and personnel resources shall be deemed to be included in the rate tendered for Item E15.15.

Add the following new subclauses to Clause 1502:

(j) Traffic diversions

Add the following:

The Contractor's attention is drawn to the heavy volume and speed of traffic carried on the affected roads and shall make due allowance therefor in his construction programme.

Traffic accommodation shall be carried out in strict accordance with the requirements of the South

African Road Traffic Signs Manual (SARTSM) – Volume 2 – Chapter 13: Roadworks Signing (June 1999). The method of accommodating traffic shall be in accordance with the layouts of the traffic-control facilities for the traffic diversions on the respective roads as shown in the South African Road Traffic Signs Manual (SARTSM) - Volume 2 Chapter 13, on the drawings or as directed by the Employer's Agent.

The Contractor shall submit a drawing showing details concerning each traffic diversion to the Employer's Agent for approval at least 7 days prior to the scheduled commissioning of such diversions to allow him sufficient time to inform and obtain the approval of the traffic officials of the relevant authorities concerned for such diversions.

(k) Parking of construction vehicles and plant

Where there is no working space off the road, construction vehicles may be parked on the shoulder only during working hours in which case flagmen and traffic cones shall be utilised to warn public traffic of the hazard. During non-working hours all obstructions to traffic shall be removed from the road.

The parking of construction plant within the road reserve outside working hours will be permitted. The minimum clearance between the parked vehicles / plant and the edge of any carriageway shoulder shall be 5 metres.

(l) Staging of construction

The work in this Contract may necessitate traffic having to be deviated onto a reduced -width carriageway and channelised into traffic lanes routed past / through the construction work areas.

Traffic shall be accommodated on the existing surfaced carriageway and shoulders. Temporary deviations are required at certain on-ramps under this contract. Accommodation of traffic will generally be carried out by closing off one lane of traffic at a time and accommodating the traffic on the other lane(s), or in the case of the two-lane carriageway sections, partly onto the temporary-surfaced shoulder.

Temporary closure or occupation of traffic lanes will only be permitted as specified and the Contractor shall ensure that all traffic control facilities no longer applicable to the situation are removed or effectively covered.

Amber flashing warning lights shall be placed on traffic lane deviations at night and when instructed by the Employer's Agent to warn motorists of lane closures and occupation of lanes for work operation areas.

It is a condition of this contract that the Contractor shall programme and arrange for adequate accommodation of traffic within the following operational limitations:

- (i) Individual work areas shall be clearly demarcated with traffic signs and delineators / cones as specified. No individual working area shall exceed 1 000 metres in length.
- (ii) Only one lane per carriageway may be closed to traffic at a time. A lane may be closed to traffic on two-lane carriageway sections with permission of the Employer's Agent. All lanes must be open to traffic at the following times:
 - AM Peak: Monday to Friday inclusive: 06:00 to 09:00.
 - PM Peak: Monday to Friday inclusive: 16:00 to 18:30.There are no lane closure time restrictions over weekends.
- (iii) Closure of a single traffic lane or partial lane will only be permitted during non-peak time periods. A minimum trafficable width of 2 x 3,0 m lanes on 2 and 3 traffic lane carriageways and 1 x 3,2 m on the ramps shall be maintained.
- (iv) Crossing of the median of dual carriageway roads by Contractor's plant or vehicles shall not be permitted.
- (v) Signage which does not apply during construction shall be removed or effectively covered.
- (vi) Signage erected for traffic accommodation purposes which is not applicable (e.g. speed limits at weekends etc) shall be effectively covered.
- (vii) Signs traffic accommodation devices for closures shall always be placed furthest away from the work area first and then by working inwards in the direction of traffic.
- (viii) On completion of the work remove delineators/cones/signs by starting at the work area and work outwards against the flow of traffic.

- (ix) Before re-opening a lane to traffic after milling/surfacing operations, temporary road marking as specified shall be applied.

Any costs related to these construction limitations and restrictions will be deemed to be covered in scheduled rates.

Whenever possible, the Contractor shall ensure that the full road width or carriageway shall be open at night and all signs no longer applicable to the situation removed or effectively covered. If the road or carriageway is not in a safe trafficable condition over the full width at the end of each day's work, the Contractor shall provide adequate flagmen, signs, barriers, lights and necessary personnel / staff to ensure a reasonable free flow of traffic on the specified traffic lanes throughout the night and the whole period that the roadway is open to traffic.

(m) Failure to Comply with the Provisions for the Accommodation of Traffic

Failure or refusal on the part of the Contractor to take the necessary steps to ensure the safety and convenience of the public traffic, accommodation of traffic, plant and personnel in accordance with these specifications or as required by statutory authorities or ordered by the Employer's Agent, shall be sufficient cause for the Employer's Agent to deduct penalties as follows:

A fixed penalty of R500,00 per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of Section 1500 of C3.4 Construction: Accommodation of Traffic Specifications.

In addition, a time-related penalty of R500,00 per day or part thereof over and above the fixed penalty shall be deducted for non-compliance to rectify any defects in the accommodation of traffic within the allowable time after an instruction to this effect has been given by the Employer's Agent. The Employer's Agent's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

The failure of or refusal by the Contractor to construct and/or maintain diversions, barricades, traffic signs or road markings at the proper time, or to take the necessary precautions for the safety and convenience of public traffic as specified or instructed by the Employer's Agent, shall be sufficient cause to suspend the Works until the required construction or maintenance has been completed to the satisfaction of the Employer's Agent.

E 1503 TEMPORARY TRAFFIC CONTROL FACILITIES

Add the following:

The layouts expected to be most commonly used in the contract are shown on the drawings of the South African Road Traffic Signs Manual (SARTSM) Volume 2 Chapter 13: Roadworks Signing (June 1999). The details shown for spacing and placement of traffic-control facilities may however, be revised at the discretion of the Employer's Agent where deemed necessary to accommodate local site geometry and traffic conditions.

(a) Traffic-control devices

The following shall be added to Clause 1503(a) of the Specifications:

Flagmen shall be provided at all access and exit points to the working areas alongside public traffic. Flagmen equipped with high visibility safety jackets, red flags, STOP/GO-RY signs and two-way radios shall be stationed at each end of the road section to ensure an orderly flow of traffic past the work area. All signals must be clear and the flagmen shall be intelligent and responsible personnel. In areas of high traffic density, the assistance of the relevant traffic authorities officials shall be solicited.

(b) Road signs and barricades

Add the following:

All temporary barricades and delineators shall be mounted on portable supports to facilitate their moving. Only sandbags will be permitted for the ballasting of the supports. The sandbags shall consist of durable material and have adequate mass to prevent signs from being blown over by the wind. Sandbags shall be placed as ballast on the supports in front of and behind the sign so as not to obstruct the traffic path past the sign. The cost of the sandbags shall be included in the tendered rates for the various types of temporary road signs.

All temporary road traffic signs shall, where possible, be mounted on poles planted outside the surfaced shoulders.

(c) Channelisation devices and barricades

Add the following:

Traffic channelisation shall be carried out by means of plastic type delineators (Sign TW401 / TW402) in accordance with SANS 1555. The sign face shall be 200 mm x 800 mm in size and shall be mounted on suitable non-metal bases. Each base shall be suitably ballasted with sandbags.

Traffic cones manufactured in a fluorescent red-orange or red plastic material may be used only for road-marking operations and other short-term lane deviations during daylight. Cones used on deviations shall be 750 mm high on the freeways and 450 mm high on other roads with suitable heavy bases to prevent the cones from being blown over by wind or turbulence from moving traffic.

Lane closures or traffic diversions that continue into nighttime shall be demarcated by delineators.

Traffic cones and delineators shall be placed at maximum intervals of 10 m on tapers and 20 m on straights unless otherwise authorised by the Employer's Agent.

(e) Warning devices

Add the following after the first paragraph:

At night and when directed by the Employer's Agent, amber flashing warning lights shall be placed at strategic places such as barricades, obstructions, etc. The warning lights shall be "Vama SA" amber flashing lights or a similar approved type.

All vehicles and items of mobile plant working on the Site shall be supplied with warning boards and rotating amber flashing lights of robust construction as described in Section 3.1.4 of Part 3 of the South African Road Traffic Signs Manual. The amber lens shall have a minimum height of 200 mm and the beacons shall be of the revolving parabolic reflector mountable type for all construction vehicles and clearly visible to approaching traffic from all directions.

The Contractor shall supply and maintain similar rotating amber flashing lights with a magnetic base, flexible cable and connection suitable for insertion into a standard 12V automobile cigarette lighter socket for the Employer's Agent and his staff.

Rotating amber flashing lights on the Contractor's plant and vehicles shall not be paid for separately but shall be included in the rates covering the use of such plant and vehicles.

The provision and maintenance of rotating amber flashing lights for the use of the Employer's Agent and his staff shall be paid under Item E15.14.

Add the following new subclauses:

(h) Maintenance

All temporary traffic control facilities shall be kept clean and maintained in good order at all times. If the coefficient of retro-reflection of any of the Contractor's signs falls below 80% of the value given in Table 1 of CKS 191 - 1987 (observation angle 0,33 , entrance angle 5,0) for the grade and colour of the material used, the sign shall be considered defective and shall either be rectified or removed and replaced.

(i) Sufficiency

The Contractor shall determine from his proposed programme, the number of sets of temporary signposts required and shall not commence erecting the signs before all the signs have been delivered to the site.

The Contractor shall replace damaged or missing items within a period of two (2) hours of the deficiency being discovered.

The Contractor shall allow for the replacement of at least five (5) percent of the traffic-control facilities scheduled in his tendered rates. If the tenderer envisages a greater or lesser percentage replacement, this must be stated in his covering letter and a revised schedule of barricades, signs and delineators shall be submitted as an alternative tender with his tender. This percentage replacement is only for traffic-control facilities damaged by the public traffic and/or if their ineffectual performance is beyond the Contractor's control and not the result of his actions or omissions.

E1505 **TEMPORARY DRAINAGE WORKS**

Add the following:

Within any individual working area, the Contractor shall make adequate provision for drainage where water can pond or be contained against a difference in depth of roadway. No separate payment will be made for the provision and use of standby pumps and dewatering equipment or cutting of drainage slot and/or channels to effectively drain the roadway surface."

The Employer's Agent may instruct the Contractor to carry out additional drainage work in the interest of safety of the travelling public. The Contractor shall make due allowance for all such drainage in the tendered rates.

E 1517 **MEASUREMENT AND PAYMENT**

Item 15.01 Accommodating traffic and maintaining temporary deviations

Delete Item 15.01 and replace with the following:

Item	Unit
E 15.01 Accommodation of traffic and maintaining temporary deviations	
(a) Traffic accommodated - Short Term works	(kilometre) km
(b) Urban Streets – Two-way lane closure	km
(c) Urban Streets – One-way traffic accommodated	km
(d) Urban Streets – Lane closure in and beyond junction	km

Delete the first sentence of the first paragraph and replace with:

"The unit of measurement shall be the kilometre, measured once along the centre-line of the road carriageway, of temporary deviations, existing roads used as temporary deviations and roads constructed, rehabilitated and/or resurfaced in half-widths. The kilometre length shall include the roadway along which traffic delineators / cones are placed for traffic accommodation (includes the transition area, the buffer zone, work area and termination area, but excludes the advance warning area). In the case of a dual carriageway, each separate road carriageway shall be measured."

Delete the second paragraph and replace with the following:

The tendered rate shall include full compensation for accommodating traffic during the different specific construction operation(s) or work phases included in the contract. The tendered rate shall also include full compensation for the provision of communications equipment required for regulating the traffic, arranging for the moving of services and facilities, solving traffic problems, complying with the legal requirements of all authorities concerned, for providing temporary access to private property, and for the provision and maintenance of temporary drainage.

The tendered rates sum shall include full compensation for the relocation of traffic-control facilities including dismantling, storing if necessary, transporting, re-erecting and inspecting the traffic-control facilities, and for all labour, equipment, constructional plant and incidentals as specified or shown on the drawings.

The tendered rate shall also include full compensation for the specified general requirements and all incidental items of cost which are required under the provisions of Section 1500 and are not specifically paid for under the other pay items provided in Section 1500.

The rate shall also include for the sign stand, for the provision of two sand bags per delineator to hold it in position and for their replacement when necessary.

The tendered rate shall also include full compensation for the provision of a full-time traffic safety officer and for all the duties performed by him.

3.4.3 WAYLEAVES, PERMISSIONS AND PERMITS

The Contractor shall be responsible for obtaining all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site, and shall ensure that any wayleaves, permissions or permits obtained by the Employer's Agent prior to the award of the contract are transferred into the Contractor's name.

The Contractor shall abide by any conditions imposed by such wayleaves, permissions or permits.

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

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

3.4.4 LOCAL PRODUCTION AND CONTENT

The Contractor will be required to comply with all requirements as stated in this document.

See Returnable Schedule 20 MBD 6.2 - Declaration Certificate for Local Production and Content for Designated Sectors in Section T2.2.

3.4.5 EMPLOYMENT OF SECURITY PERSONNEL

All security staff employed by the contractor on behalf of the Langeberg Municipality or at any Langeberg Municipality property must be registered with Private Security Industry Regulatory Authority (PSiRA). Proof of such registration must be made available to the Employer's Agent upon request.

PROJECT SPECIFICATIONS REFERRING TO THE PARTICULAR SPECIFICATIONS

3.4.2.2 PROJECT SPECIFICATIONS REFERRING TO PARTICULAR SPECIFICATIONS

The SASTT Technical Standards for Trenchless construction works are Particular Specifications for this contract and are available from the Southern African Society for Trenchless Technology website www.sastt.org.za to download free of charge.

The following variations and additions to the Particular Specifications referred to in clause 3.4.2.1 apply to this Contract. The prefix PS indicates an amendment to the Particular Specifications. The letters and numbers following these prefixes respectively indicate the relevant Particular Specification and clause numbers to which the variation or addition thereunder applies.

CONTENTS

SASTT –TS-TT1:2010 Edition 1 Part TT1: Slip-lining of pipelines

SASTT –TS-TT2:2013 Edition 1 Part TT2: Pipe bursting

SASTT –TS-TT3:2017 Edition 1 Part TT3: Horizontal directional drilling

PROJECT SPECIFICATION DATA APPLICABLE TO SASTT-TS-TT1 SLIPLINING OF PIPELINES

PS-TT1 UPGRADING OF ROBERTSON SIPHON SPECIFICATION

PS-TT1-1	BULK CLEANING
PS-TT1-2	FINAL CLEANING
PS-TT1-3	CCTV INSPECTION AND ASSESSMENT
PS-TT1-4	CCTV CAMERA WORK DURING LINING INSTALLATION
PS-TT1-5	FINAL CCTV INSPECTION
PS-TT1-6	INSPECTION PITS
PS-TT1-7	ISOLATION OF PIPELINE
PS-TT1-8	PROOF TESTING OF LINER
PS-TT1-9	SLIPLINING OF PIPELINE
PS-TT1-10	REMOVAL OF EXISTING LINER UNDER WINE TANK
PS-TT1-11	SURVEY OF EXISTING SIPHON PIPELINE

This set of specific specifications covers the bulk cleaning of the Siphon pipeline, its inspection and assessment and lining by HDPE Slip-lining.

The project will entail some or all of the following types of work:

PS-TT1-1 BULK CLEANING

The Robertson siphon conveys raw water that is pumped from an irrigation canal and the pipeline is not expected to have any deposits of sediment in it. It is also not expected to have any encrustations on the internal surface of the pipe. Bulk cleaning of the pipeline is not expected.

The CCTV inspection of the pipeline will confirm the cleanliness of the pipeline.

The Contractor shall take precautions during the construction, use and backfilling of inspection, point repair, winching and insertion pits to avoid contaminating the pipeline with material. Any such material shall be removed from the pipeline by the contractor at his own cost.

Payment for the final cleaning of pipelines immediately prior to lining shall be included in the rates for lining.

The Cleaning shall be performed in accordance with Particular Specification PS-TD.

PS-TT1-1.1 Measurement and Payment

<u>Item</u>	<u>Unit</u>
FS1.1 Bulk Cleaning of siphon pipeline (Provisional)	m

The unit of measurement shall be linear metre of pipeline cleaned.

The rate tendered shall include full compensation for the bulk cleaning of the pipelines, including the removal of cleaned material and for transporting and tipping.

PS-TT1-2 FINAL CLEANING

The Contractor is required to undertake final cleaning prior to pipe lining.

The Final Cleaning shall be performed in accordance with Particular Specification PS-TD.

The cost of such Final Cleaning is deemed to be included in the rates for pipe lining, which must include for removing the cleaned material from the system and transporting it to the tip and shall include tipping costs.

PS-TT1-3 CCTV INSPECTION AND ASSESSMENT

The pipeline shall be inspected using a CCTV camera inspection system to assess and confirm the condition and cleanliness of the pipeline. The Contractor shall provide a recording of the CCTV inspection on DVD/USB in video format and the condition of the pipes are to be assessed and reports produced using WinCan.

The siphon will be drained by the municipality to allow the inspections to take place.

For this exercise inspection pits will have to be excavated onto the pipeline, an aperture made in the pipe and the camera inserted. The dimensions and physical condition of the pipe shall be measured and

observed at the same time. The insertion pits shall be located at positions where winch/insertion pits will be excavated for the actual installation of the liner.

The siphon will be drained and will be empty for one week. The Contractor shall inspect the whole pipeline to be lined in that week. The Contractor will have to excavate the inspection pits in advance of the inspections.

The inspection pits will be measured and paid for separately.

The CCTV inspections shall be performed in accordance with Particular Specification PS-TC.

PS-TT1-3.1 Measurement and Payment

<u>Item</u>	<u>Unit</u>
FS3.1 CCTV Inspection Siphon pipeline	m

The unit of measurement shall be linear metre of pipeline inspected.

The rate tendered shall include full compensation for the CCTV inspection of the pipelines including, camerawork, provision of inspection reports and recordings.

PS-TT1-4 CCTV CAMERA WORK DURING LINING INSTALLATION

CCTV camera work is usually an integral part of the pipelining installation and is deemed to be included in the rates for such work.

PS-TT1-5 FINAL CCTV INSPECTION

The Contractor is required to make a CCTV inspection of the lined pipeline and provide a report and DVD recording containing computer generated text stating location, pipe size, distance etc.

The CCTV inspections shall be performed in accordance with Particular Specification PS-TC.

The cost of such inspection is deemed to be included in the rates for pipe lining.

PS-TT1-6 INSPECTION PITS

Inspection pits will have to be excavated onto the pipeline and an aperture made in the pipe to allow a CCTV camera to be inserted. The dimensions and physical condition of the pipe shall be measured and observed at the same time. The insertion pits shall be located at positions where winch/insertion pits will be excavated for the actual installation of the liner.

The section of pipe to be removed for the insertion of the CCTV camera, shall be replaced and glued in position with Epidermix 372 and a Cascade repair clamp (approximately 450 mm outside diameter and 600 mm in length applied to the repair. The Epidermix 372 and the Cascade repair clamp shall be installed in accordance with their manufacturer's instructions.

PS-TT1-6.1 Measurement and Payment

<u>Item</u>	<u>Unit</u>
Construct inspection pit	No

The unit of measurement shall be number.

The price tendered and paid shall include full compensation for clearing, excavation, safety measures, dewatering, removal of a section of pipe, safekeeping of the section of pipe, fixing the pipe section back in place using epoxy glue, supply and application of a cascade repair clamp, maintenance whilst open, closure and sealing the existing pipe, backfilling, temporary surface reinstatement and all supervision, labour, materials, transport, equipment and incidentals required.

PS-TT1-7 ISOLATION OF PIPELINE

During the contract the siphon pipeline will have to be drained to enable CCTV inspections and proof slip lining and then again when the construction gets underway.

The scour valve may only be operated, and the siphon drained by municipal officials.

PS-TT1-8 PROOF TESTING OF LINER

During the inspection phase a section of the pipeline shall be chosen for proof testing of the liner. The length shall be up to 200m between two inspection pits.

The Contractor shall prepare at least a 10 m length of 355 OD HDPE PE 100 pipe which shall have at least one butt welded joint. The test section shall have a pulling nose at each end and sufficient cabling to pull the liner the full length in both directions.

The contractor shall insert the liner pipe and winch it from one pit to the other, then winch it back in the opposite direction and remove the test liner from the pipe. During this operation the pulling load shall be continuously monitored and recorded. Any difficulties with the proving shall be recorded. The Contractor shall arrange for the Engineer to be present during the test.

PS-TT1-8.1 Measurement and Payment

<u>Item</u>	<u>Unit</u>
Proof testing of liner	m

The price tendered and paid shall include full compensation for providing the liner, pulling heads, winches and all supervision, monitoring labour, materials, transport, equipment and incidentals required.

PS-TT1-9 SLIPLINING OF PIPELINE

PS-TT1-9.1 General

The slip-lining of pipes shall be performed in accordance with the SASTT-TS-TT1:2010 Technical Standard for Trenchless construction works Part TT1: Slip-lining of pipelines included in the Particular Pipeline Rehabilitation Specifications, supplemented by the project specific specification data included in this clause.

In this contract the rehabilitation of the siphon pipeline by trenchless technology methods is specified to be by slip-lining. This is a specialized method of construction and presents significant risks. It is a prerequisite that the lining be performed under the direct supervision of a person experienced in the slip-lining of similar pipelines.

The Engineer may instruct the contractor to perform point repairs on the pipeline to remedy any blockage or condition in the pipe that cannot be achieved internally.

The Contractor shall remove both the internal and external welding beads from the pipeline before installation.

To accommodate traffic and allow access to properties it is a requirement of this contract that the pipeline be strung out to minimise the inconvenience of the public. The Contractor shall accomplish this by holding the welded pipeline in position using suitable chocks to prevent lateral movement of the pipeline.

PS-TT1-9.2 Liner Pipe (SASTT-TS-TT1 Clause 4.1.1 a))

The liner pipe shall be a solid wall High Density Polyethylene (HDPE) PE 100 pipe of the diameters and Classes stated on the drawings. The pipe shall conform to SABS 4427:1996 (E) and shall have a material design stress of 8 MPa (PE100).

PS-TT1-9.3 Testing of welded joints (SASTT-TS-TT1 Clause 4.1.1 b) iv and v)

Before any production welding is commenced the Contractor, the following shall be approved by an inspector in accordance with SANS 10270 for heated-tool butt welding of pipes:

1. A Welding Procedure Specification (WPS) and
2. A qualification joint

In addition the Contractor shall allow for a five welded joint tensile tests to be performed during the performance of the contract. These additional tests may be ordered by the Engineer.

The Contractor shall allow for the cost of complying with this clause in his rates for slip-lining.

PS-TT1-9.4 Grout (SASTT-TS-TT1 Clauses 4.1.2, 4.2.7.1, 5.2.1.1)

The annulus between the HDPE liner pipe and the existing pipe shall be grouted up with a low strength annulus filler with a minimum 28 day compressive strength of 2 MPa.

The grout shall be cured in cubes and tested for a 7 day minimum compressive strength of 1 MPa.

PS-TT1-9.5 Re-establishment of connections (SASTT-TS-TT1 Clause 4.2.8.2)

The existing connections onto the Robertson Siphon shown on the drawings and found during the CCTV inspection are to be re-established once the liner has been installed. Polyethylene heat-fusion saddles or strap-on saddles with neoprene gaskets and stainless steel straps shall be installed in accordance with the manufacturer's recommendations and shall conform to SANS 4427-3:2008. For larger connections the Engineer may instruct multiples saddles and a manifold to be installed at a connection position.

PS-TT1-9.6 Pressure testing (SASTT-TS-TT1 Clause 5.2.2)

Prior to insertion, each length of welded pipe liner shall be pressure tested in accordance with SABS 1200 L. The installed liner shall be pressure tested per pressure class of pipe installed. The test pressure shall be 1,25 times the pipe class pressure rating (ie 5 bar for class PN4 pipe and 7,5 bar for class PN6 pipe).

PS-TT1-9.7 Measurement and Payment

PS-TT1-9.7.1 Pay Item	Unit
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Supply and install by slip-lining solid wall High Density Polyethylene (HDPE) PE 100 liner pipes.

Classs PN (SDR)

Outside Diameter mm insidemm Inside Diameter host pipe

at m

The liner pipe shall be measured on actual length of liner installed.

The price tendered and paid shall include full compensation for the cost of manufacturing, supply and installing the liner, butt welding, testing of welds, pipe fittings, joints and couplings, liner pipe supports, accommodation of flows, final cleaning of pipelines, CCTV inspections, sealing at the manholes, reforming manhole benchings, watertight seals, bulkheads, grouting the annulus testing, safety measures, all supervision, labour, materials, transport, equipment and incidentals required to reline the host pipeline.

Insertion pits, grouting the annulus and service reconnection shall be measured and paid for separately.

PS-TT1-9.7.2 Pay Item	Unit
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Service Reconnection No

The service reconnections shall be paid for each pipe connection that is re-established. Pay items may be itemised according to pipe sizes and types.

The price tendered and paid shall include full compensation for the cost of excavations, installing pipe junctions or saddles and making good.

PS-TT1-9.7.3 Pay Item	Unit
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Construct pits for winching/insertion of liner:

at Sum

The unit of measurement shall be a sum per particular winching /insertion pit. The insertion pit shall be priced according to the requirements of the Contractor which shall be determined by his specific proposal for the insertion of the pipeline. The Contractor shall ensure that the proposed insertion pit is suitable.

The price tendered and paid shall include full compensation for clearing, excavation, shoring on all sides, safety measures, dewatering, removal of the top of the pipeline, maintenance whilst open, closure and

sealing the existing pipeline, backfilling, removal of shoring, the full reinstatement of the surface finishes and all supervision, labour, materials, transport, equipment and incidentals required for the insertion pit.

PS-TT1-9.7.4 Pay Item **Unit**

Grouting of annulus m3

Grouting of the annulus shall be measured per cubic metre of grout placed.

The price tendered and paid shall include full compensation for installing bulkheads, accommodation of flows, mixing and pumping of materials, testing, safety measures, all supervision, labour, materials, transport, equipment and incidentals required to grout the annular space between the liner pipe and the host pipeline including any grout that penetrates through the host pipeline and fills any surrounding cavities.

PS-TT1-10 REMOVAL OF EXISTING LINER UNDER WINE TANK

The original 375 mm internal diameter pipe under the Klipdrift Brandy wine tank was slip-lined with a 365 mm outside diameter plastic pipe. It is thought that the plastic pipe liner can be pulled out and the original pipe lined with the new liner

The existing plastic line must be removed from the existing concrete pipe just prior to it being lined with the new 355 mm HDPE Class PN6 pipe liner. This must be accomplished by disconnecting the plastic pipe from the existing pipelines and winching the existing pipe out.

If possible this must take place when the existing tank is empty or has minimum contents. The Contractor shall liaise with the property owners regarding the programming of this work.

PS-TT1-10.1 Measurement and Payment

Item Unit

Remove existing pipe liner under wine tank Sum

The price tendered and paid shall include full compensation for disconnecting the existing plastic liner, attaching cables, winches and all supervision, monitoring labour, materials, transport, equipment and incidentals required.

PS-TT1-11 SURVEY OF EXISTING SIPHON PIPELINE

There are no accurate records of the location of the Robertson Siphon. It is a requirement of this contract that whenever the pipeline is exposed it shall be surveyed for position and level.

Wherever the top of the pipeline is exposed the contractor shall arrange for the top of the siphon pipe to be surveyed in position and level. The position must be accurate to 100 mm and the level of the top of the pipe to 10 mm.

The Contractor shall provide the Engineer with a list of the co-ordinated positions and levels and a CAD drawing with the referenced positions.

PS-TT1-11.1 Measurement and Payment

Item Unit

Survey and provide co-ordinates and level of every exposure of siphon pipe Sum

The price tendered and paid shall include full compensation for all survey work and recording of information.

PROJECT SPECIFICATION DATA APPLICABLE TO SASTT-TS-TT2 PIPE BURSTING

PS-TT2-1 Liner Pipe (SASTT-TS-TT2 Clause 4.1.1 a))

The pipe shall be a solid wall high density polyethylene (HDPE) PE 100 pipe colour black of various scheduled diameters and PN pressure classes.

PS-TT2-2 Welders (SASTT-TS-TT2 Clause 4.1.1 b) iii)

Welders shall be IFPA members and shall imprint each weld with their unique IFPA identification stamp displaying the IFPA company number, welder number and IFPA logo, issued in accordance with the Welder Identification System.

The Contractor shall also provide a certificate of calibration for the welding machine to be used. The certificate shall bear the model number of the welding machine, the name and address of the certifying agent, the date of the test and a statement as to the accuracy of the temperature and pressure gauges on the machine in question. A certificate of calibration should be dated no earlier than 30 days prior to the day on which the Contractor is to commence work. The cost of the test must be included in the rates submitted.

The contractor shall provide a digital thermometer or similar for the accurate measurement of the weld temperatures.

PS-TT2-3 Testing of welded joints (SASTT-TS-TT2 Clause 4.1.1 b) vi)

Before any production welding is commenced by the Contractor, the following shall be approved by an inspector in accordance with SANS 10270 for heated-tool butt welding of pipes:

1. A Welding Procedure Specification (WPS) and
2. A qualification joint

In addition, the Contractor shall allow for a five welded joint tensile tests to be performed during the performance of the contract. These additional tests may be ordered by the Employer's Agent.

The Contractor shall allow for the cost of complying with this clause in his rates for HDD.

PS-TT2-4 Beads (SASTT-TS-TT2 Clause 4.1.1 c))

The internal and/or external welding beads of pipes for sewers shall be removed. The external welding beads of pipes for watermain shall be removed. The removed beads from each joint shall be retained in separate labelled transparent bags and handed to the Employers Agent.

Once welding of a joint has been completed and allowed to cool then the external bead shall be removed by an approved means to produce a smooth outer diameter necessary to prevent any snagging during the drilling process. Additionally, the internal bead shall be removed using an approved bead removal tool. The beads are to be placed in a transparent plastic bag with the joint number marked on the bag for inspection by the Employer's Agent.

Each joint shall be carefully examined for cleanliness and uniformity to ensure that the welded joint is capable of withstanding the tensile forces exerted on the joint during the drilling process. All joints shall be watertight. The width of the bead removed must be within the specified limits. The bead should be twisted at several positions. Should the bead split at any point, the joint from which the bead was removed, must be cut out and redone. If similar defects occur, no further welding should be done till the equipment is examined and approved.

PS-TT2-6 Pressure testing (SASTT-TS-TT2 Clause 5.2.1)

Prior to insertion, each length of welded pipe shall be pressure tested in accordance with SABS 1200 L. The installed liner shall be pressure tested per pressure class of pipe installed. The test pressure shall be 1,25 times the pipe class pressure rating

PS-TT2-7 Measurement and Payment (Annex C)

The measurement and payment clauses described in Annex C of the standard shall apply.

PS-TT2-7.1 Replace pipe by pipe bursting (Clause 1.1)

Supply and install by pipe bursting Unit: m

The measurement and payment for the installation of pipes shall apply, except that the work shall be divided into two parts as follows:

Supply and install by pipe bursting

a) Supply and delivery to site of HDPE Class PN..... PE 100 pipe Unit: m

b) Install by pipe bursting HDPE Class PN..... PE 100 pipe (including butt welding) Unit: m

PS-TT2-7.2 Service reconnections (Clause 1.2)

Service reconnections are measured and paid under Sections H: Sewers and Section I: Medium Pressure Pipelines.

PS-TT2-7.3 Construct of pits (Clause 1.3)

Construction of pits are measured and paid under Section C: Earthworks (Pipe Trenches).

PROJECT SPECIFICATION DATA APPLICABLE TO SASTT-TS-TT3 HORIZONTAL DIRECTIONAL DRILLING

PS-TT3-1 Liner Pipe (SASTT-TS-TT3 Clause 4.1.1 a))

The pipe shall be a solid wall high density polyethylene (HDPE) PE 100 pipe colour black of various scheduled diameters and PN pressure classes.

PS-TT3-2 Welders (SASTT-TS-TT3 Clause 4.1.1 b) iii)

Welders shall be IFPA members and shall imprint each weld with their unique IFPA identification stamp displaying the IFPA company number, welder number and IFPA logo, issued in accordance with the Welder Identification System.

The Contractor shall also provide a certificate of calibration for the welding machine to be used. The certificate shall bear the model number of the welding machine, the name and address of the certifying agent, the date of the test and a statement as to the accuracy of the temperature and pressure gauges on the machine in question. A certificate of calibration should be dated no earlier than 30 days prior to the day on which the Contractor is to commence work. The cost of the test must be included in the rates submitted.

The contractor shall provide a digital thermometer or similar for the accurate measurement of the weld temperatures.

PS-TT3-3 Testing of welded joints (SASTT-TS-TT3 Clause 4.1.1 b) vi)

Before any production welding is commenced by the Contractor, the following shall be approved by an inspector in accordance with SANS 10270 for heated-tool butt welding of pipes:

3. A Welding Procedure Specification (WPS) and
4. A qualification joint

In addition, the Contractor shall allow for a five welded joint tensile tests to be performed during the performance of the contract. These additional tests may be ordered by the Employer's Agent.

The Contractor shall allow for the cost of complying with this clause in his rates for HDD.

PS-TT3-4 Beads (SASTT-TS-TT3 Clause 4.1.1 c))

The internal and/or external welding beads of pipes for sewers and pipe sleeves shall be removed. The external welding beads of pipes for watermain shall be removed. The removed beads from each joint shall be retained in separate labelled transparent bags and handed to the Employers Agent.

Once welding of a joint has been completed and allowed to cool then the external bead shall be removed by an approved means to produce a smooth outer diameter necessary to prevent any snagging during the drilling process. Additionally, the internal bead shall be removed using an approved bead removal tool. The beads are to be placed in a transparent plastic bag with the joint number marked on the bag for inspection by the Employer's Agent.

Each joint shall be carefully examined for cleanliness and uniformity to ensure that the welded joint is capable of withstanding the tensile forces exerted on the joint during the drilling process. All joints shall be watertight. The width of the bead removed must be within the specified limits. The bead should be twisted at several positions. Should the bead split at any point, the joint from which the bead was removed, must be cut out and redone. If similar defects occur, no further welding should be done till the equipment is examined and approved.

PS-TT3-5 Drill plan approval (SASTT-TS-TT3 Clause 4.3.1.7)

The drill plan shall be approved by the Employers Agent.

PS-TT3-6 Pressure testing (SASTT-TS-TT3 Clause 5.2.1)

Prior to insertion, each length of welded pipe shall be pressure tested in accordance with SABS 1200 L. The installed liner shall be pressure tested per pressure class of pipe installed. The test pressure shall be 1,25 times the pipe class pressure rating

PS-TT3-7 Measurement and Payment (Annex C)

The measurement and payment clauses described in Annex C of the standard shall apply.

PS-TT3-7.1 HDD installation of pipes (Clause 1.2.5)

HDD installation of pipes Unit: m

The measurement and payment for the installation of pipes shall apply, except that the work shall be divided into three parts as follows:

HDD installation of pipes

- a) Drilling of pilot bore in sand, clay or shale Unit: m
- b) Supply and delivery to site of HDPE PN 6 PE 100 pipe sleeve Unit: m
- c) HDD installation of HDPE PN 6 PE 100 pipe sleeve in sand, clay or shale (including butt welding) Unit: m

PS-TT3-7.2 Install pipe in pipe sleeve (New clause)

- a) Supply and deliver to site of HDPE PN 12.5 PE 100 pipe Unit: m
- b) Butt weld and install HDPE PN 12.5 PE 100 pipe in pipe sleeve Unit: m
The rate shall include the butt welding, testing, and drawing of the pipeline into the sleeve previously installed by HDD.

C3.5 Management

CONTENTS

- 3.5.1. FORMS FOR CONTRACT ADMINISTRATION
- 3.5.2. PARTICIPATION OF TARGETED LABOUR
- 3.5.3. COMMUNITY LIAISON OFFICER
- 3.5.4. PARTICIPATION OF TARGETED ENTERPRISES
- 3.5.5. ENVIRONMENTAL MANAGEMENT SPECIFICATION
- 3.5.6. HEALTH AND SAFETY SPECIFICATION

3.5.1 FORMS FOR CONTRACT ADMINISTRATION

The Contractor shall complete, sign and submit with each monthly statement for payment in respect of each Works Project contract, the following updated returns (the format of which are attached in C3.6 Annexes):

- a) Monthly Project Labour Report (Annex 1)
- b) B-BBEE Sub-Contract Expenditure Report (Annex 2)
- c) Joint Venture Expenditure Report (Annex 3)
- d) Targeted Labour Contract Participation Expenditure Report (Annex 4)
- e) Targeted Enterprises Contract Participation Expenditure Report (Annex 5)

The Monthly Project Labour Report must include details of all labour (including that of sub-contractors) that are South African citizens earning less than R350.00 per day, as adjusted from time to time (excluding any benefits), who are employed on a temporary or contract basis on this contract in the month in question.

In addition to the Monthly Project Labour Report the Contractor shall simultaneously furnish the Employer's Agent with copies of the signed employment contracts entered into with such labour, together with certified copies of identification documents as well as evidence of payments to such labour in the form of copies of payslips or payroll runs. If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it and proof of such acknowledgement shall be furnished to the Employer's Agent.

The Monthly Project Labour Reports shall be completed and submitted in accordance with the instructions therein and copies of all submitted documents must be kept on site be made available to the Employer's Agent upon request.

The **B-BBEE Sub-Contract Expenditure Report** is required for monitoring the prime contractor's compliance with the sub-contracting conditions of the **Preference Schedule**.

The Joint Venture Expenditure Report is required for monitoring the joint venture's compliance with the percentage contributions of the JV partners as tendered, where the joint venture has been awarded preference points in respect of its consolidated B-BBEE scorecard.

The Targeted Labour Contract Participation Expenditure Report is required for monitoring the contractor's compliance for achieving the specified minimum targeted labour contract participation goal (CPG_L) and, if applicable, for calculating any penalty in terms thereof.

The Targeted Enterprises Contract Participation Expenditure Report (if applicable) is required for monitoring the contractor's compliance for achieving the specified minimum targeted enterprises contract participation goal (CPG_E) and, if applicable, for calculating any penalty in terms thereof.

The Expenditure Reports shall be verified by the Employer's Agent/Employer's Agent's Representative.

In respect of Annexes 2 and 3, the Employer shall, in addition to any other sanctions available to it, apply the financial penalties applicable to breach of preferencing conditions in the **Preference Schedule** in Part T2.2 Returnable Schedules. In the case of joint ventures (Annex 3), the contractor shall prove his

compliance with item 6) in Section 2 of the **Preference Schedule** by providing a consolidated scorecard at his own cost on instruction from the Employer's Agent.

3.5.2 PARTICIPATION OF TARGETED LABOUR

3.5.2.1 Employment of Local Labour

It is the intention that this Contract should make 100% use of the unskilled local labour force for all non-specialised activities. To this end the Contractor shall limit the utilisation on the Contract of non-local employees to that of key personnel and specialised activities only and to employ and train local labour to the extent necessary for the execution and completion of this Contract.

The Contractor shall have filled in the Key Personnel Register Form. The data stated on the form will be strictly monitored during the Contract period and any deviations therefrom shall be subject to the prior approval of the Employer's Agent, which approval shall not be unreasonably withheld.

3.5.2.2 Minimum targeted labour contract participation goal

In support of the National Department of Public Works' Expanded Public Works Programme which is aimed at alleviating poverty through the creation of temporary employment opportunities using labour intensive methodologies and practices where possible, the Employer is seeking to increase the intensity of labour, as appropriate, in all of its infrastructure sector projects.

It is a requirement of this term tender contract, therefore, that the work be executed in such a manner so as to maximise the use of labour intensive construction methods in order to provide low and semi-skilled temporary employment opportunities.

To this end, a minimum targeted labour contract participation goal is specified below, which shall be achieved by the Contractor in the performance of each Works Project contract, failing which, penalties as described will be applied. The Contractor is required to provide all skills training where necessary, so as to ensure that a minimum level of competence is achieved and maintained, such that the various activities are carried out safely and to the required standard. The cost of training shall be included in the rates for the various work activities.

The specified minimum targeted labour contract participation goal (CPG_L) is

0 %

The minimum CPG_L is such that the Contractor will have to carry out some of the work that would normally have been undertaken using mechanised construction methods, by using labour intensive construction methods instead. It is left to the discretion of the Contractor to identify suitable work activities for the intensification of labour. The Contractor shall, within 5 working days of being requested in writing by the Employer's Agent to do so, submit details of his/her plan to achieve the minimum CPG_L in the Works Project. If, due to the selection of items and quantities in any individual Works Project, it is not possible for the Contractor to achieve the specified minimum CPG_L on that particular Works Project, then the Employer's Agent, at his/her sole discretion, may reduce such minimum CPG_L upon motivation by the Contractor.

3.5.2.3 Definitions

For the purposes of the requirements in respect of the participation of targeted labour, the following definitions shall apply:

"Target area" means the geographical area described in the Works Project contract document.

"Targeted labour contract participation goal (CPG_L)" means the sum of the wages (excluding any benefits), for which the Contractor, or any of his/her sub-contractors contracts targeted labour in the performance of the contract, expressed as a percentage of the value of the contract.

"Targeted labour" means low and semi-skilled individuals, whose wages (excluding any benefits) do not exceed the threshold value, who reside in the target area, that are employed by the Contractor, or any of his/her sub-contractors, in the performance of the contract.

"Threshold value" is R350.00 per day as adjusted from time to time (excluding any benefits). The threshold value is not to be confused with any industry sector minimum wage determined in accordance with the Basic Conditions of Employment Act, 75 of 1977.

"Value of the contract" means the **Works Project** contract sum (accepted contract amount) less provisional sums, contingencies and VAT.

3.5.2.4 The selection and recruitment of targeted labour

Where targeted labour is to be drawn from specific local communities (defined in terms of the target area), such labour shall be identified using the relevant Sub-Council Job-Seekers Database. The Contractor shall request, via a Community Liaison Officer (if required in terms of the contract), a list of suitable candidates from the database, from which the Contractor shall make his/her final selection. The contractor shall enter into written contracts of temporary employment with all targeted labour.

Any difficulty experienced by the Contractor in identifying candidates though the Job-Seekers Database, or as regards any matter relating to the employment of targeted labour, shall be immediately referred to the Employer’s Agent.

3.5.2.5 Contract participation goal credits

Credits towards the achieving the minimum CPG_L shall be granted by converting the total monetary value of wages paid to targeted labour (including that of sub-contractors) to a percentage of the value of the contract. No credits shall be accorded should the contractor/sub-contractor fail to enter into written contracts with the targeted labour. Furthermore, no credits shall be accorded in respect of targeted labour employed on work in respect of provisional sums or prime cost items. Such labour shall nevertheless be recorded on the Monthly Project Labour Report which is required to be furnished by the Contractor.

3.5.2.6 Training of targeted labour

The Contractor is required to provide all informal (on-the-job) skills training so as to ensure that a minimum level of competence is achieved and maintained, such that the various activities are carried out safely and to the required standard. The cost of informal training shall be included in the rates for the various work activities.

3.5.2.7 Penalties

The financial penalty to be applied for failing to meet the specified minimum targeted labour contract participation goal in the performance of the contract (unless proven to be beyond the control of the Contractor), is as follows:

Penalty = (CPG_L^S - CPG_L^A) x P*

Where CPG_L^S = the specified minimum targeted labour contract participation goal (expressed as a percentage).

CPG_L^A = the targeted labour contract participation goal achieved (expressed as a percentage).

P* = the value of the contract.

3.5.3 COMMUNITY LIAISON OFFICER

Certain Works Projects may require a Community Liaison Officer (CLO) to be appointed by the Contractor. The primary functions of the CLO shall be to assist the Contractor with the selection and recruitment of targeted labour, to represent the local community in matters concerning the use of targeted labour (and/or enterprises) on the works, and to assist with and facilitate communication between the Contractor, the Employer’s Agent and the local communities.

The identification of suitable candidates (maximum 5; minimum 3) for the CLO position shall be resolved by the relevant Ward Councillor/s. Should suitable candidates not be identified within two weeks of the date of request, the Contractor shall be allowed to seek candidates from the relevant Sub-Council Job-Seekers Database. The final selection and appointment of the CLO in terms of the contract shall be the responsibility of the Contractor.

The period of appointment of the CLO shall be as stated in the Contract for Temporary Employment as a Community Liaison Officer referred to below. The date of commencement of temporary employment of the CLO shall be as agreed with the Employer’s Agent.

If it is required, therefore, that the Contractor enter into a contract of temporary employment with the selected CLO, the contracting parties will be the Contractor and the CLO. To this end, a specimen Form of Contract of Temporary Employment as Community Liaison Officer is included in this document (Part C1.9 Community Liaison Officer). This Form of Contract sets out, inter alia, the agreement between the parties, the duties and conditions of employment of the CLO (including the rate of remuneration to be paid). As said contract will be between the Contractor and the CLO, all costs involved shall be borne by

the Contractor and items will be provided in the Bills of Quantities in the Works Project contract document therefor.

3.5.4. PARTICIPATION OF TARGETED ENTERPRISES

3.5.4.1 Minimum targeted enterprises contract participation goal

It is a requirement of this contract that enterprises located within the target area, as defined, be engaged by the Contractor for the provision of supplies, services or works necessary for the performance of this contract.

To this end, a minimum targeted enterprises contract participation goal is specified below, which shall be achieved by the Contractor in the performance of the contract, failing which, penalties as described will be applied.

The specified minimum targeted enterprises contract participation goal (CPG_E) is

0 %

The Contractor shall engage targeted enterprises directly or indirectly in the performance of the contract to the extent that the total monetary value of such engagements (exclusive of VAT), expressed as a percentage of the value of the contract, is sufficient to achieve the specified minimum CPG_E.

3.5.4.2 Definitions

For the purposes of the requirements in respect of the participation of targeted enterprises, the following definitions shall apply:

“**Target area**” means the geographical area described in the Works Project contract document.

“**Targeted enterprises contract participation goal (CPG_E)**” means the value of supplies, services or works (exclusive of VAT), for which the Contractor contracts targeted enterprises, either directly or indirectly, in the performance of the contract, expressed as a percentage of the value of the contract.

“**Targeted enterprises**” means any sole trader, partnership or legal entity that acts as a supplier, manufacturer, service provider or sub-contractor, and which has its base of operations in the target area.

“**Value of the contract**” means the contract sum (accepted contract amount) less provisional sums, contingencies and VAT.

3.5.4.3 Achieving the contract participation goal

The contractor may achieve the specified minimum CPG_E as follows:

- a) by engaging one or more targeted enterprises to perform commercially useful functions in the performance of the contract;
- b) by engaging non-targeted enterprises, who in turn engage one or more targeted enterprises to perform commercially useful functions in the performance of the contract;
- c) by a combination of the above.

The Contractor shall, within 5 working days of being requested by the Employer’s Agent to do so, submit details of his/her plan to achieve the minimum CPG_E.

3.5.4.4 Contract participation goal credits

Credits towards achieving the minimum CPG_E shall be granted by converting the total monetary value (exclusive of VAT) of the agreements between the Contractor, or Contractor’s sub-contractors, and targeted enterprises, to a percentage of the value of the contract.

No credits shall be accorded should the Contractor (or sub-contractors):

- a) make direct payment to third parties in connection with the contract on behalf of targeted enterprises, when such payment is recovered by making deductions from payments due to the targeted enterprise;
- b) fail to enter into written contractual agreements with the relevant targeted enterprises.

Credits claimed towards the contract participation goal shall be denied where such written contractual agreements contain any of the following:

- c) conditions which are more onerous than those that exist in the prime contract (this contract);
- d) payment procedures based on a pay when paid system;
- e) authoritarian rights given to the employing contractor, with no recourse to independent adjudication in the event of a dispute arising.

No credits may be claimed in respect of targeted enterprises that do not adhere to statutory labour practices.

No credits shall be accorded in respect of targeted enterprises engaged on work in respect of provisional sums or prime cost items.

In the event that a targeted enterprise sub-contracts to another targeted enterprise, only the value of the higher level sub-contract shall be granted as credit towards achieving the specified minimum CPG_E.

In addition to the form required for contract administration (the Targeted Enterprises Contract Participation Expenditure Report), the Contractor shall furnish the Employer's Agent, upon written request, with documentary evidence that the targeted enterprises have their base of operations in the target area, copies of the contractual agreements with the various targeted enterprises, as well as documentary proof of payments made to the various targeted enterprises.

3.5.4.5 Penalties

The financial penalty to be applied for failing to meet the specified minimum targeted enterprises contract participation goal in the performance of the contract (unless proven to be beyond the control of the Contractor), is as follows:

$$\text{Penalty} = (\text{CPG}_E^S - \text{CPG}_E^A) \times P^*$$

Where CPG_E^S = the specified minimum targeted enterprises contract participation goal (expressed as a percentage).

CPG_E^A = the targeted enterprises contract participation goal achieved (expressed as a percentage).

P* = the value of the contract.

3.5.5 ENVIRONMENTAL MANAGEMENT SPECIFICATION

Particular Specification E: Environmental Management Specification and its Annexures are attached hereto.

3.5.6 HEALTH AND SAFETY SPECIFICATION

Particular Specification H:: Health and Safety Specification is attached hereto.

PARTICULAR SPECIFICATION E
ENVIRONMENTAL MANAGEMENT
SPECIFICATION

1. SCOPE

This Specification covers the requirements for controlling the impact on the environment of construction activities.

2. DEFINITIONS

Environment means the surroundings within which humans exist and that are made up of -

- (i) the land, water and atmosphere of the earth
- (ii) micro-organisms, plant and animal life;
- (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and
- (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

Potentially hazardous substance is a substance, which, in the reasonable opinion of the Engineer, can have a deleterious effect on the environment.

Method Statement: a written submission by the Contractor to the Engineer following a request by the Engineer, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, identified by the Engineer when requesting the Method Statement, in such detail that the Engineer is enabled to assess whether the Contractor's proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications.

The Method Statement shall cover applicable details with regard to:

- construction procedures,
- materials and equipment to be used,
- getting the equipment to and from site,
- how the equipment/ material will be moved while on site,
- how and where material will be stored,
- the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur,
- timing and location of activities,
- compliance/ non-compliance with the Specifications and
- any other information deemed necessary by the Engineer.

Reasonable means, unless the context indicates otherwise, reasonable in the opinion

of the Engineer after he has consulted with a person, not an employee of the Employer, suitably experienced in "environmental implementation plans" and "environmental management plans" (both as defined in Act No 107, 1998).

Solid waste means all solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, food and domestic waste (e.g. plastic packets and wrappers).

Contract means the General Conditions of Contract and Special Conditions, Specifications, Drawings, Tender, written records of matters agreed after the submission of the Contractor's tender, Letter of Acceptance and Agreement, together with other documents which the parties have agreed in writing shall form part of the Contract and such amendments or additions to the Contract as may be agreed in writing between the parties.

Contaminated water means water contaminated by the Contractor's activities.

1. MATERIALS

1.1 MATERIALS HANDLING, USE AND STORAGE

The Contractor shall ensure that any delivery drivers are informed of all procedures and restrictions (including "no go" areas) required to comply with the Specifications. The Contractor shall ensure that these delivery drivers are supervised during off loading, by someone with an adequate understanding of the requirements of the Specifications.

Materials shall be appropriately secured to ensure safe passage between destinations. Loads including, but not limited to sand, stone chip, fine vegetation, refuse, paper and cement, shall have appropriate cover to prevent them spilling from the vehicle during transit. The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.

All manufactured and/ or imported material shall be stored within the Contractor's camp, and, if so required by the Project Specification, out of the rain. All lay down areas outside of the construction camp shall subject to the Engineer's approval which shall not unreasonably be withheld.

1.2 HAZARDOUS SUBSTANCES

Hazardous chemical substances (as defined in the Regulations for Hazardous Chemical Substances) used during construction shall be stored in secondary containers. The relevant Material Safety Data Sheets (MSDS) shall be available on Site. Procedures detailed in the MSDS's shall be followed in the event of an emergency situation.

If potentially hazardous substances are to be stored on site, the Contractor shall provide a Method Statement detailing the substances/ materials to be used, together with the storage, handling and disposal procedures of the materials.

2. PLANT

2.1 FUEL (PETROL AND DIESEL) AND OIL

Where reasonably practical, plant shall be refueled at the depot or at the workshop as applicable. If it is not reasonably practical then the surface under the refueling area shall be protected against pollution to the reasonable satisfaction of the Engineer prior to any refueling activities. *Enretech* or similar products approved by the Engineer shall be available during any refueling or maintenance activities.

2.2 ABLUTION FACILITIES

Washing, whether of the person or of personal effects and acts of excretion and urination are strictly prohibited other than at the facilities provided.

2.3 SOLID WASTE MANAGEMENT

No on-site burying or dumping of any waste materials, litter or refuse shall occur. All solid waste shall be disposed offsite at an approved landfill site. The Contractor shall supply the Engineer with a certificate of disposal.

The handling of asbestos pipe and material must be undertaken in such a way not endanger any person (own workers or the public). The removed pieces must be sealed inside double skin bags and transport and dumped inside designated "asbestos material" skips at the Water Works Depot (Wellington).

2.4 CONTAMINATED WATER

The Contractor shall set up a contaminated water management system, and a Method Statement is required in this regard. The Method Statement shall state the collection facilities, which are to be used to prevent pollution, as well as the method of disposal of the contaminated water. The Contractor shall notify the Engineer immediately of any pollution incidents on Site.

2.5 SITE STRUCTURES

All site establishment components (as well as equipment), shall be positioned to limit visual intrusion on neighbours. The type and colour of roofing and cladding materials to the Contractor's temporary structures shall be selected to reduce reflection.

2.6 LIGHTS

The Contractor shall ensure that any lighting installed on a particular site for his activities does not interfere with road traffic or cause a reasonably avoidable disturbance to the surrounding community or other users of the area.

2.7 WORKSHOP, EQUIPMENT MAINTENANCE AND STORAGE

Where practical, all maintenance of equipment and vehicles on Site shall be performed in the workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain the approval of the Engineer prior to commencing activities.

The Contractor shall ensure that in his workshop and other plant maintenance facilities, including those areas where, after obtaining the Engineer's approval, the Contractor carries out emergency plant maintenance, there is no contamination of the soil or vegetation. The workshop shall have a smooth impermeable (concrete or thick plastic) floor. The floor shall be bonded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil). When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants. Drip trays shall also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles).

All vehicles and equipment shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from the Site. The washing of equipment shall be restricted to urgent maintenance requirements only. All washing shall be undertaken in the workshop or maintenance areas, and these areas must be equipped with a suitable impermeable floor and sump/oil trap. The use of detergents for washing shall be restricted to low phosphate and nitrate containing, low sudsing type detergents.

2.8 NOISE

The Contractor shall limit noise levels (e.g. install and maintain silencers on machinery). The provisions of SABS 1200A Sub-clause 4.1 regarding "built-up areas" shall apply to all areas within audible distance of residents whether in urban, peri-urban or rural areas. Appropriate directional and intensity settings are to be maintained on all hooters and sirens.

No amplified music shall be allowed on Site. The use of radios, tape recorders, compact disc players, television sets etc. shall not be permitted unless the volume is kept sufficiently low as to avoid any intrusion on members of the public within range. The Contractor shall not use sound amplification equipment on Site unless in emergency situations. Construction activities generating output levels of 85 dB(A) or more, in residential areas, shall be confined to the **hours 08h00 to 17h00 Mondays to Fridays and Saturdays from 08h00 to 14h00. No work on Sundays will be allowed.**

3. CONSTRUCTION

3.1 METHOD STATEMENTS

Any Method Statement required by the Engineer shall be produced within such reasonable time as the Engineer shall specify. The Contractor shall not commence the activity until the Method Statement has been approved and shall, except in the case of emergency activities, allow a period of two weeks for approval of the Method Statement by the Engineer. Such approval shall not unreasonably be withheld.

The Engineer may require changes to a Method Statement if the proposal does not comply with the specification or if, in the reasonable opinion of the Engineer, the proposal may result in, or carries a greater than reasonable risk of, damage to the environment in excess of that permitted by the Specifications.

Approved Method Statements shall be readily available on the site and shall be communicated to all relevant personnel. The Contractor shall carry out the Works in accordance with the approved Method Statement. Approval of the Method Statement shall not absolve the Contractor from any of his obligations or responsibilities in terms of the Contract.

3.2 SITE DIVISION

The Contractor shall restrict all his activities, materials, equipment and personnel to within the area specified. A Method Statement detailing the layout and method of establishment of the construction camp [including all buildings, hostels, offices, lay down yards, vehicle wash areas, fuel storage areas, batching areas and other infrastructure required for the running of the project shall be provided.

3.3 DEMACATION

As required by the Project Specification, the Contractor shall erect and maintain permanent and/ or temporary fences of the type and in the locations directed by the Engineer. Such fences shall, if so specified, be erected before undertaking designated activities.

3.4 "NO GO" AREAS

If so required by the Project Specification, certain areas shall be "no go" areas. The Contractor shall ensure that, insofar as he has the authority, no person, machinery, equipment or material enters the "no go" areas at any time.

3.5 ACCESS ROUTES/ HAUL ROADS

On the Site, and, if so required by the Project Specification, within such distance of the Site as may be stated, the Contractor shall control the movement of all vehicles and plant including that of his suppliers so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic and that all relevant laws are complied with. In addition such vehicles and plant shall be so routed and operated as to minimise disruption to regular users of the routes not on the Site. On gravel or earth roads on Site and within 500m of the Site, the vehicles of the Contractor and his suppliers shall not exceed a speed of 45 km/hr.

3.6 CONSTRUCTION PERSONNEL INFORMATION POSTERS

If so required by the Project Specification, the Contractor shall erect and maintain information posters for the information of his employees depicting actions to be taken to ensure compliance with aspects of the Specifications. Such posters speed of 45 km/hr. Such posters shall be erected at locations specified by the Engineer.

3.7 FIRE CONTROL

No fires may be lit on site. Any fires that occur shall be reported to the Engineer immediately. Smoking shall not be permitted in those areas where it is a fire hazard which areas shall include the workshop and fuel storage areas and any areas where the vegetation or other material is such as to make liable the rapid spread of an initial flame.

The Contractor shall appoint a Fire Officer who shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedure to be followed.

The Contractor shall ensure that there is basic fire-fighting equipment available on Site at all times. This shall include at least rubber beaters when working in urban open spaces and fynbos areas, and at least one fire extinguisher of the appropriate type when welding activities are undertaken.

Emergency procedures shall be placed at locations specified by the Engineer. Within 500m of the Site the Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

3.8 PROTECTION OF FLORA AND FAUNA

Except to the extent necessary for the carrying out of the Works, flora shall not be removed, damaged or disturbed nor shall any vegetation be planted. Trapping, poisoning and/ or shooting of animals is strictly forbidden. No domestic pets or livestock are permitted on site.

Where the use of herbicides, pesticides and other poisonous substances has been specified, the Contractor shall submit a Method Statement.

3.9 EROSION AND SEDIMENTATION CONTROL

The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities and shall, in addition, comply with such detailed measures as may be required by the Project Specification. Where erosion and/or sedimentation, whether on or off the Site, occurs despite the Contractor complying with the foregoing, rectification shall be carried out in accordance with details specified by the Engineer. Where erosion and/or sedimentation occurs due to the fault of the Contractor, rectification shall be carried out to the reasonable requirements of the Engineer.

3.10 AESTHETICS

The Contractor shall take reasonable measures to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

3.11 RECREATION

If so required by the Project Specification, the Contractor shall take measures to reduce disruption to recreational users of the area abutting the Site.

3.12 TEMPORARY SITE CLOSURE

If the Site is closed for a period exceeding one week, the checklist procedure required by the Project Specification shall be carried out by the Contractor in consultation with the Engineer.

3.13 AESTHETICS

The Contractor shall take reasonable measures to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

3.11 RECREATION

If so required by the Project Specification, the Contractor shall take measures to reduce disruption to recreational users of the area abutting the Site.

3.12 TEMPORARY SITE CLOSURE

If the Site is closed for a period exceeding one week, the checklist procedure required by the Project Specification shall be carried out by the Contractor in consultation with the Engineer.

3.13 AESTHETICS

The Contractor shall take reasonable measures to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

3.14 TOLERANCES

Environmental management is concerned not only with the final results of the Contractor's operations to carry out the Works but also with the control of how those operations are carried out. Tolerance with respect to environmental matters applies not only to the finished product but also to the standard of the day-to-day operations required to complete the Works.

It is thus required that the Contractor shall comply with the environmental requirements on an ongoing basis and any failure on his part to do so will entitle the Engineer to certify the imposition of a fine subject to the conditions in the Pro Forma: Protection of the Environment and the details set out in the Project Specification.

PARTICULAR SPECIFICATION H

HEALTH AND SAFETY SPECIFICATION

Generic Project Health and Safety Specification

In terms of Construction Regulations 2014

Project Client

LANGEBERG MUNICIPALITY

Description of Project Works

***T36/2024 PIPE REPLACEMENT TENDER USING
CONVENTIONAL AND TRENCHLESS METHODS,
(RATES BASED) ENDING 30 JUNE 2027***

Project Location

LANGEBERG MUNICIPALITY

PROJECT HEALTH AND SAFETY SPECIFICATION

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1.0 SPECIFIC PROJECT INFORMATION

1.1 INTRODUCTION AND DEFINITIONS

THE REQUIREMENTS OF THE CONSTRUCTION REGULATIONS 2014 (AND GUIDANCE NOTES OF 2017) HAVE BEEN IN EFFECT SINCE 7TH AUGUST 2014. THE REGULATIONS PLACE LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THE REGULATIONS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND OTHER ASSOCIATED HEALTH AND SAFETY REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

PLEASE NOTE THAT THE TERMS "CONTRACTOR" AND "PRINCIPAL CONTRACTOR" HAVE THE SAME MEANING AS THAT IN THE CONSTRUCTION REGULATIONS AND ARE USED INTERCHANGEABLY IN THIS DOCUMENT, I.E., REFERENCES TO "CONTRACTOR" REFER TO PRINCIPAL CONTRACTOR AND/OR CONTRACTOR AS THE REGULATIONS PERTAIN TO THEIR FUNCTIONS.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to work on site. Compliance to the requirements of the Occupational Health and Safety Act 1993 is an additional requirement of this Health and Safety Specification and is part of the Contractor's responsibility. The Client, and/or their agents, will monitor that all Contractors comply with the requirements of such legislation.

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO SAFETY AGENT, WHERE SO APPOINTED.

Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:

"agent" means a competent person who acts as a representative for a Client;

"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"client" means any person for whom construction work is being performed;

"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration, and management of resources on a construction site;

"construction site" means a workplace where construction work is being performed;

"construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work; "construction work" means any work in connection with -

- a) the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work; Note:

a) Includes organisations and or self-employed person that contracts with a client, principal contractor, or a contractor to carry out construction work.

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications;

"designer" means a competent person who-

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter, or landscape architect;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimise human well-being and overall system performance;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails, and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines, or similar equipment;

"falsework" means a combined system of formwork and support work;

"formwork" means temporary or permanent shutters used to form wet concrete into elements of a structure, and includes both horizontally and vertically placed shutters;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;

"fall protection plan" means a documented plan, which includes and provides for -

- 1 all risks relating to working from a fall risk position, considering the nature of work undertaken;
- 2 the procedures and methods to be applied in order to eliminate the risk of falling; and
- 3 a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file" means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the Client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the Client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding

passengers; "medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the Client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

"structure" means-

- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or
- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning, or dismantling and where any construction work involves a risk of a person falling;

"support work" means the temporary structure erected to support the formwork before the casting of a concrete element of a structure.

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support;

"temporary works" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"tunnelling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings, and reports):

- Tender documents
- Drawings

IMPORTANT NOTE:

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION

Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents, and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has arranged for the preparation of this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract.

Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.

IMPORTANT NOTE:

Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.

Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate resource in their tender submission to comply with all legislative requirements.

Failure to comply with the requirements of this Safety Specification will result in severe sanction and the severity of the sanction will depend on the severity of the noncompliance.

The Contractor's personnel will be responsible for the auditing of the implementation of the Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will arrange for Health and Safety audits to be conducted on site on their behalf to monitor health and safety compliance by contractors.

1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

The purpose of this site-specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Safety Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards, and expectations that the contractor must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities. Please note that a detailed OHS bill of quantities must be provided by the contractor on all Construction Work Permit projects. The Bill of Quantities will form part of the Construction Work Permit application presented to Department of Labour for approval.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements.

Further, there is no acceptance of liability by the Client which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with other Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all Contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client (or their appointed safety agent) prior to commencement with construction work.

1.4.1 Client Duties

In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to “definitions” section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

All references to “Client” will apply to their appointed “Safety Agent”, where so appointed, in this Health and Safety Specification.

The Client must:

- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented, and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the Client to enable each of those contractors to comply with the regulations
- Ensure, before work commences, that every principal contractor is registered and in good standing with the compensation fund, or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor's safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor's health and safety plan is implemented and maintained
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor's health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the Client requires additional work to be performed as a result of a design change or error in construction due to the actions of the Client, the Client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the Client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations
- Where the Client has appointed a Safety Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.

1.4.2 Designer Duties

It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to “definitions” section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.

Please note that the designer of temporary works must ensure that:

- all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- the designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- all drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- the loads caused by the temporary works and any imposed loads are clearly indicated in the design.

1.5 PROJECT DIRECTORY		
Project Client	Langeberg Municipality	Tel: 023 615 8000 Cell: TBA
Contact Person	Marius Norman	Email: mnorman@langeberg.gov.za
Project Manager / Principle Agent	Langeberg Municipality	Tel: TBA Cell: 0828947906
Contact Person	Neil Albertyn	Email: nalbertyn@langeberg.gov.za
Construction Safety Agent	TBC	Tel: Cell: E-mail:

OTHER PARTIES DIRECTORY	
Department of Labour	Tel: 021 441 8158
WESTERN CAPE – Fezeka Ngalo	Cell: 083 365 0681 e-mail: fezeka.ngalo@labour.gov.za
Telecommunications, Water, Gas and Electricity Contractor to apply for and refer to wayleave information from service providers for the nature and location of services. Refer all queries Project Manager.	

1.6 PROJECT DETAILS

Description of Works

- Establishment on site by the Contractor
- The supply of labour, tools, equipment, materials and supervision to complete the work
- Setting out of the Works
- Excavations
- Installation of new water and sewer line
- Backfilling

This description of the works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

Anticipated Construction Duration

TBC

Provisional Start Date

TBC

Provisional Completion Date

TBC

Construction Work Permit Required for the Project?

No

1.7 EXISTING ENVIRONMENT
Hazards particular to this project by virtue of location: • The works are located in residential areas with members of public and vehicular traffic present. • Live services (underground, overhead) will be present in the area of the works.
Overhead, Above Ground and Underground Services crossing the site: Overhead: Principal Contractor to protect against damage and risks to safety of workforce and public. Overhead services present. Underground: Principal Contractor to protect against damage and risks to safety of workforce and public. Water, sewer, Telkom and fibre, electrical present. Ground level: Principal Contractor to protect against damage and risks to safety of workforce and public. Street lighting present. Service Drawings available: Yes Wayleaves required: Yes Permits required: TBA Isolations required: No.

Existing structures on site and surrounding land use (with a significant impact on Health & Safety):

- The works are located in residential areas with members of public and vehicular traffic present.
- Live services (underground, overhead) will be present in the area of the works.

Existing ground conditions and ground survey report:

- Geotechnical queries to be referred to project manager.
- Excavation depth 2.82m.
- No Geotech report available.
- Shoring and dewatering not thought to be required.
- No known issues with soil contamination.

Existing Traffic Systems

Condition: Existing two way surfaced roads for the most part.

Restrictions to access: None known. Roads are narrow.

Speed restrictions: Usual urban speed limits apply.

1.8 AVAILABLE DRAWINGS
Refer to tender documentation.

1.9 PROJECT HEALTH AND SAFETY REQUIREMENTS
Significant health and safety hazards identified by Client, Designer and Safety Agent: Use of delivery or support trucks used for the delivery and removal of material and equipment on open roadways – plant must be effectively separated from members of public and unauthorised personnel. Flag persons wearing high visibility clothing to be in place as required. Exclusion zone to be in operation when the support vehicles are in use next to the roadways. Any plant that will be moving in or around the road must be made visible at all times. Parking of this plant must be strictly monitored by the contractor at all times. Use flag persons as applicable. Plant must be effectively separated from members of public and unauthorised personnel. Members of the public and road traffic – the sites are located in existing residential area. The site works will present safety issues regarding risks to members of public and road traffic. The health and safety of members of public and road users must be a priority at all times and all necessary steps must be taken to prevent unauthorised entry to site and to protect members of the public from any dangers associated with the construction works being undertaken. Existing roads will remain open during works. This is a critical hazard to traffic/members of public and to workers in the road who must have high visibility clothing on at all times. Safety of road users and workers is crucial and must be managed by Principal Contractor. The Principal Contractor is responsible for the directional signage to divert pedestrian members of the public and road users. Where applicable - flag persons to control traffic with red flags and to have high visibility clothing on at all times. A traffic accommodation plan may be required. Noise and Dust control: Measures to be put in place by the appointed contractor to minimize the dust and noise on site. Contractor must take sufficient steps to reduce the production of noise and dust.

Warning Notices: Construction warning signage must be prominently displayed to avoid access to site areas by unauthorised persons.

Risk of fires caused by construction works and / or Smoking – ensure correct measures are in place for fire control to ensure no fires will break out. Fire extinguishing equipment to be readily available at all times especially during high risk activities. The smoking of cigarettes is also to be monitored and adequate smoking areas and smoking control measures to be put in place

Live services – services present in the works areas. All necessary precautions must be taken to prevent accidental contact with these services. All services to be treated as live.

Lifting Operations – all operators must provide copies of their up to date competency and medical certificates and driver's license. Loads must be slung by person with appropriate training and competence. Daily plant inspection registers to be completed and records kept in the safety file. Valid load test certificates and record of inspections by competent personnel must be available and maintained throughout the project. Rotating amber lights and reverse alarms to be active when operating all plant on site. Plant must be effectively separated from members of public and unauthorised personnel. Use trained flag persons as applicable. Exclusion zone under lifting operations to be enforced as applicable. Particular attention must be paid to lifting operations in windy conditions.

Excavations – max depth will be 2.82m. Shoring and dewatering not thought to be required. Method statement to be in place. All workers must receive induction prior to commencement of works. Excavations must sloped to a safe repose or otherwise made safe against collapse. **Excavations must be backfilled by end of each shift as far as is reasonably practicable.** If this cannot be done then appropriate safety measures must be put in place by the contractor to prevent unauthorised entry to excavations, including barriers and warning signage. Ensure there is a safe distance between employees and plant when digging excavations.

- ALL EXCAVATIONS MUST HAVE A MINIMUM OF ORANGE PLASTIC BARRIER MESH IN PLACE.
- Red & white danger tape is not permitted for securing excavated areas.
- Excavated soil is to be placed at a sufficiently safe distance from the excavation itself.
- Water seepage / water table management into excavated areas

Confined spaces (manholes / chambers), as applicable – when installing hydrants & valves approximately 1,000mm deep - confined space work must be monitored by a competent appointed person. Prior to entry, ensure that confined space is sufficiently ventilated. Oxygen levels to be tested in confined space to ensure that it is safe for entry. Personal protective equipment to be worn (such as proper masks) if air supply insufficient or not of sufficient quality. Emergency procedures to be in place. Sufficient training must take place in use of equipment prior to any works commencing in such confined space. Permit system to be in place to declare confined space safe for entry.

Other construction hazards that the contractor can reasonably expect are as follows:

Compacting and Filling
Compactor Operations
Cutting Off Disc
Electric Tools and Electrical Installations
Flammable Liquids / Gas
Hot Works
Hand tools
Manhole Rings and Pipes Storage
Manual Handling of General Items
Plant/Vehicle and Equipment Operation
Contact with sewage

NOTE: Please refer to end of this Health and Safety Specification for the baseline risk assessment for these hazards and risks.

ACTIVITIES REQUIRING PERMITS (FOR HEALTH AND SAFETY PURPOSES)

Permit to Dig: Where applicable, Principal Contractor to approach service providers.

Permit to Enter Excavations: The Principal Contractor is to formally manage all excavation work.

Road Works Permit: The Principal Contractor to liaise with the professional team.

Permit to Work with Electricity: Where applicable, Principal Contractor to approach service providers.

Confined Space Permit: The Principal Contractor is to formally manage all confined space work.

Hot Works Permit: The Principal Contractor is to formally manage all hot work.

Permit to Work under Power Lines: The Principal Contractor is to formally manage all works in the vicinity of overhead services so that there is no risk of injury to or from personnel involved in the construction works.

Blasting: n/a

Temporary Works: n/a

CONTRACTOR SAFETY OFFICER PROVISION

Records of safety audits undertaken by the Contractor's Safety Officer must be kept on site in the safety file and nonconformances reported by the Safety Officer to the Contractor's management team. All nonconformances identified by the Safety Officer and client's safety agent must be investigated and corrective action taken by the Contractor to prevent re-occurrence.

Please note that as from 7th August 2018 the safety officer must be professionally registered with the SACPCMP. Proof of registration with the SACPCMP must be provided.

If registered as a Candidate proof of mentorship and weekly visits by mentor must be available on site.

The requirement for this site is that a part time Safety Officer be appointed to be on site by the Contractor, visiting site on at least a fortnightly basis.

MEDICAL CERTIFICATE OF FITNESS (ANNEXURE 3)

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template.

MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate competent person must be appointed by the principal contractor. Proof of an all-inclusive assessment by the Principal Contractor of the Construction Manager's Competency in construction management and health and safety competency must be available in the Safety File.

The Construction Manager, Alternate Construction Managers, Assistant Construction Managers, and designated construction supervisor/s must, as a minimum, have training in Legal Liability, Construction Regulation 2014 and the OHS Act and Regulations.

TRAFFIC MANAGEMENT AND TRAFFIC SAFETY OFFICER PROVISION

The Traffic Management Plan will be prepared by the Traffic Engineer and be approved by the Project Manager and, as required, the Traffic Chief as per the National Road Traffic Act, No. 93 of 1996. The Traffic Safety Officer (TSO) must have training as per Unit Standard 14561 or similar.

- The principal contractor is to implement the Plan before the start of works.
- Note that new jersey barriers may need to be provided for works in the road and usual trench barricading where the works are within the sidewalks or verges.

ENVIRONMENTAL CONDITIONS

Contractor must take into account adverse weather conditions on site activities and implement control measures to mitigate risk. This includes risk of exposure to excessive heat, cold, rain, lightning and wind.

The open nature of the site works will not preclude any of the above.

ARRANGEMENTS FOR ACCESS, PARKING, DELIVERIES, ETC.

Off existing roads. Residents must have access to their properties at all times as well as emergency vehicles.

All service providers must sign a 37.2 Mandatory Agreement and must be inducted before they can be allowed on site.

ARRANGEMENTS FOR SITE CAMP, ABLUTIONS AND YARD

Site camp location and set up

- | | | |
|--------------------------------|---|--------------------------------------|
| • Restrictions / requirements: | } | |
| | } | |
| • Storage areas: | } | Contractor to advise in consultation |
| | } | with Engineer / Professional Team |
| | } | |
| • Security: | } | |

Ablutions and Welfare Arrangements

Contractor to supply ablutions and facilities in line with the Construction Regulations 2014, refer to section 2.31 of this health and safety specification regarding the below. Toilets should be provided with built in facilities for hand washing. Please note further that control measures form an important part of ablutions provision on site ref soap and water/hand sanitiser, signage, etc:

- | | | |
|-----------------------|---|--|
| • Toilets: | } | |
| | } | |
| • Washing facilities: | } | Contractor to provide as per Regulations |
| | } | |
| • Drinking Water: | } | |
| | } | |
| • Shelter: | } | Contractor to provide as per Regulations |
| | } | |
| • Showers: | } | |

Mobile site facilities requirements:

A camping toilet/mobile toilet will be required for sites that cannot facilitate a permanent location for ablution units and must be available for each gender per location.

The use of a camping toilet must be prepared and setup correctly with additional anchors and available toiletries prior to each working day and to be first priority when changing location of works along a set working path.

Teams are to ensure that the toilets are cleaned correctly and suitable for easy and hygienic uses and recorded on a daily register.

PROTECTION OF SITE AGAINST UNAUTHORISED ACCESS BY PUBLIC

Excavation Fencing: Note that excavations accessible to public, or adjacent to public roads / thoroughfares, must have (1) barrier / fence of at least 1m in height, and (2) warning illuminants at night or when visibility is poor, or have other suitable precautionary measures if of both these are not practicable.

- Orange plastic barrier mesh fencing is to be used at the minimum during excavation.
- Excavations are to be sufficiently fenced off if they are to be left open. Wherever possible, all excavations are to be backfilled at the end of each shift.
- Note requirements regarding protection of excavations in and alongside public roads.

General Fencing of Site: Note that construction sites in built up areas adjacent to public walkway must be fenced off and have controlled access points with the correct signs to indicate the site office for any relevant enquiries.

- Site camp / site yard is to be fenced off with 1.8m fence panels and be access controlled.
- Work areas to be fenced off with orange plastic barrier mesh fencing as minimum to keep unauthorised persons off the site. More robust measures (metal fencing panels) may be required at interface of works with public if there is a high risk to members of public safety.
- Please note requirements of the traffic management plan with respect to barricading of site.
- Site is not currently fenced.

Warning Notices: Construction warning signage must be prominently displayed to avoid unauthorised access to site and to warn of dangers associated with construction works.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Client requires the Contractor to ensure that employees (and others under his/her control) wear the following minimum PPE:

Overalls: Yes.

Safety Harnesses: As per risk assessment.

Hard Hats: Yes, as per risk assessment.

Reflective Vests: Yes.

Goggles / gloves / ear defenders / respiratory protection: Yes, as per risk assessment.

Safety Footwear: Yes.

Specialist Equipment (e.g. for confined Spaces): Yes, as per risk assessment.

HAZARDOUS SUBSTANCES

The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:

Cement – Fuels (Petrol & Diesel) – Oils

1.10 INTERFACE AND RESTRICTIONS BY CLIENT

Contractor must note that the following Client activities will continue during construction:

- No client activities noted.
- The surrounding area remains accessible to the general public.

The following Client safety rules and/or requirements are to be observed:

All workers are to receive induction prior to commencement of work on site.

Other safety rules and requirements to be advised at induction.

Please also refer to tender document.

Restrictions on times, access or other restrictions by Client

Please refer to tender document.

Other restrictions may be advised at induction.

1.11 Project Close Out

The Health and Safety files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project in the form of a consolidated safety file. The following list is an example of what should be included but is not exhaustive. The Safety Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are responded to. Documentation would include all health and safety related records from the start of the project. All records to be in hard copy or electronic format and submitted to the Safety Agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.

Consolidated Health and Safety close out file requirements include:

- Health and safety specification (most recent version)
- Principal Contractor's health and safety plan/s
- Site safety organograms
- Legal appointments
- Notification to Department of Labour of commencement of work / Construction Work Permit
- Workman's Compensation Letters of Good Standing for the project
- Full safety files for all contractors as well as their close out reports
- List of all contractors who worked on site
- Letters of safety plan approval of contractors by the Principal Contractor
- Mandatory agreements (section 37.2 agreements)
- Incident and accident records / Occupational Disease records
- Contractor Nonconformance records
- Safety agent's audit reports
- Safety Officer reports
- Method Statements
- Risk assessments
- Safe work procedures
- Medical surveillance certificates of fitness. Medical records are to be kept according to the Occupational Health and Safety Act, as amended.
- All temporary works drawings (suspended beams/scaffolds, etc.)
- Copies of test results, policies, and procedures for environmental monitoring (silica, noise, dusts, etc.)
- Detailed registers of all material used
- Copies of all Checklists completed

1.12 SAFETY FILE RETURN TO CLIENT

The consolidated Health and Safety Files for the Project is to be handed over by the Principal Contractor to the Client upon Project Completion in either hard copy or electronic format.

2.0 FURTHER REQUIREMENTS

2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the Client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the Client's documented health and safety specifications, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the Client, the Client's Safety Agent, or a Contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
 - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - appoint each contractor in writing for the part of the project on the construction site
 - take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
 - ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
 - stop any contractor from executing construction work which is not in accordance with the Client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;

- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the Client, or the Client's Safety Agent;
- hand over a consolidated health and safety file to the Client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the Client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the Client, the Client's Safety Agent or the principal contractor;
- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the Client, the Client's Safety Agent or the Principal Contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

2.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor. Proof of all-inclusive assessment of the Construction Manager's Competency in construction management and H & S competency must be available in the Safety File. The Construction Manager must, as a minimum, have a Construction Regulation course. No contractors may be left unsupervised on site by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.

No construction manager appointed in terms of the Regulations may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

A contractor must, after consultation with the Client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor.

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site. Proof of all-inclusive assessment of the Construction Supervisor's competency in construction supervision and H&S competency must be available in the Safety File. The Construction Supervisor must, as a minimum, have a supervision course as per Unit Standard 262845 (Civil Engineering), 119080 (Building Construction) and 262884 (Civil Engineering).

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

2.3 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

- Include excavation work
- Include work at height where there is a risk of falling
- Include the demolition of a structure, or
- Include the use of explosives to perform construction work.

If the construction work involves construction of a single storey dwelling for a Client, and such Client will be residing in such dwelling upon completion, the contractor must also notify the Provincial Director of the Department of Labour at least 7 days before the works commence.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.

2.4 Construction Work Permit

Not thought to be applicable to this project.

2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to **Annexure B** at the end of this Health and Safety Specification).

2.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

2.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

2.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations. The Policy must be communicated to all employees and proof thereof must be available in the Safety File.

2.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated when there is a change in the site team.

2.10 Risk Assessments

Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method
- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan

The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated, and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site**.

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site**.

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the Client, Client's Safety Agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member).

A Contractor must review the relevant risk assessment where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved.

In general, the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors, and Contractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;

- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

2.11 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The Safety Representative(s) must be democratically nominated, elected, and appointed in writing. The Health and Safety Representative(s) shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. The Safety Representative(s) shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents, and non-conformances. The Safety Representative(s) must be (a) full time employee(s) who is/are acquainted with conditions and activities at that workplace or section thereof. The Safety Representatives must have Safety Representative training and must be capable of performing their duties.

2.12 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

PLEASE NOTE THAT THE SAFETY AGENT MAY REQUIRE THAT THE PRINCIPAL CONTRACTOR CONVENES A SAFETY COMMITTEE MEETING ON SITE IN THE INTERESTS OF HEALTH AND SAFETY ON SITE. SUCH COMMITTEE MEETING MAY REQUIRE ATTENDANCE OF CONTRACTORS SAFETY OFFICERS/SAFETY REPRESENTATIVES, CONSTRUCTION SUPERVISION AND THE SAFETY AGENT.

2.13 Medical Certificate of Fitness

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.14 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

2.14.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

2.14.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, weekly or before any hazardous work takes place. The talks shall cover the relevant activity, and an attendance register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health and safety file as evidence of training.

2.15 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence. All training must be conducted by an accredited training provider and the certificates must display the applicable unit standards and the expiry dates thereof.

2.16 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training, etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

2.17 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by this Health and Safety Specification, as well as by health and safety legislation.

2.18 Emergency Procedures

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service delivery protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel.

2.19 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

- First Aid box/es must be adequately stocked at all times, accessible and be controlled by a qualified First Aider.
- Perishables to be checked and replaced when expired.
- Stock per content list as per the General Safety Regulations Annexure.
- Signage to be in place.
- To be numbered and sealed with name of first aider on or above the First aid box.
- Dressing logbook to be available in the first aid box.
- If more than 5 employees are present, there must be a first aid box available.
- Register to be checked by a Competent person.

If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

2.20 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record, and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

2.21 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

2.22 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 dB; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage. Signage must comply with the requirements of SABS.

2.23 Management of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

2.24 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

2.25 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and

- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

2.26 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
 - has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
 - has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water, or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm;
- are equipped with fire extinguishers (2.5 – 4.5 kg); and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms, or similar appendages, fully lowered, or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set, and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material, and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working, or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.
- all plant and vehicles are be fitted with amber rotating beacons and reverse alarms.

- ALL construction site vehicles must be inspected daily especially if it has dangerous “items” (fuel, explosives, etc.) on vehicle, completed inspection registers must also be available for inspection.
- the vehicles must resemble the original manufacturer’s product. Levers, alarms, and amber lights to be fitted to construction vehicle for notification of vehicle.
- fire extinguishers, signage, and licence disc to be correctly mounted and displayed.
- when the vehicle is stationary no key to be left in or on vehicle or plant.
- Drip tray must be present when stationary.

2.27 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied, or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids
- proper containers are to be used for fuel. Marked and labelled as per the content.
- diesel on site; more than 800 litres must have a certificate, fire safe certificate. Locked in a ventilated, secure area with a drip tray and have a designated, responsible person to use it.

2.29 Water environments

Not thought to be applicable to this project.

2.30 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids, and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
 - only suitably protected electrical installations and equipment, including portable lights, are used;
 - there are no flames or similar means of ignition;
 - there are conspicuous notices prohibiting smoking;
 - oily rags, waste, and other substances liable to ignite are without delay removed to a safe place; and
 - adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting, and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
 - persons to be evacuated speedily without panic;
 - persons to be accounted for; and
 - plant and processes to be shut down; and
- a siren is installed and sounded in the event of a fire.

2.31 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- Toilets to be within walking distance
- Hygiene registers to be completed
- Proof of safe disposal of effluent waste disposal certificates to be obtained
- changing facilities for each sex;
- and sheltered/shaded eating area.
- Protection from the Elements and raised off the ground.
- Every employer shall provide sanitary facilities at the workplace in accordance with the provisions of Parts F, P and Q of the National Building Regulations.
- Sufficient clean water for all employees. 500ml to each employee every hour.

A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.32 Fall protection

Not thought to be applicable to this project.

2.33 Temporary works

Not thought to be applicable to this project.

2.34 Excavation

A contractor must-

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
- evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

A contractor who performs excavation work-

- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where-
 - the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
 - such an excavation is in stable material: Provided that-
 - permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
 - where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
- must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
- must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
- must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six metres from the point where any worker within the excavation is working;
- must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
- must ensure that every excavation, including all bracing and shoring, is inspected-
 - daily, prior to the commencement of each shift;
 - after every blasting operation;
 - after an unexpected fall of ground;
 - after damage to supports; and
 - after rain,by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the Client, the Client's Safety Agent, any other contractor or any employee;
- must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –
 - adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and

- provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
- must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;
- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosive's legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

2.35 Demolition Work

Not thought to be applicable to this project.

2.36 Tunnelling

Not thought to be applicable to this project.

2.37 Scaffolding

Not thought to be applicable to this project.

2.38 Bulk mixing plant

Not thought to be applicable to this project.

2.39 Rope Access Work

Not thought to be applicable to this project.

2.40 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.

The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

2.41 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
 - Engineering methods considered
 - Admin control (number of employees exposed) considered
 - Personal protective equipment considered/decided on
- Describe how records are going to be kept for 40 years.

2.42 Explosives and Blasting

Not thought to be applicable to this project.

2.43 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision to keep adequate quantities of appropriate, SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.

2.44 Asbestos

Not thought to be applicable to this project.

2.45 Pressure Vessels (Including Gas Bottles)

The Contractor shall comply with Pressure Vessel Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where pressure vessels are used, as applicable;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers).
- Under pressure vessels to have the following in place;
 - Service date
 - Seals on valves with no leaks and not broken
 - flash arrestors
 - Should be stored and chained together
 - Oxygen / Acetylene bottles to have clips
 - Signage to be visible
 - Gauges in working condition and be visible
 - Permits for use
- Pressure equip Regs 6. (1) The user shall ensure that the pressure equipment is operated and maintained within its design and operating parameters.

2.46 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

Safety signage shall be posted up in all areas where fire extinguishers are located.

2.47 Lifting Machinery and Tackle

The Contractor shall ensure that lifting machinery and tackle is inspected before use and on a monthly basis. The Contractor shall have lifting machinery and tackle inspector who will inspect the equipment at intervals required by the Driven Machinery Regulations, taking into account that:

- All lifting machinery and tackle have a safe working load clearly indicated
- Regular inspection and servicing is carried out
- Records are kept of inspections and of service certificates
- Thorough examinations are carried out by competent personnel at the frequencies required by legislation
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use
- Forklift to be inspected every year and lift plan every 2 years
- Load test certificate to be no older than 6 months
- Sufficient props to be used and max weight to be displayed
- Slings to be checked with regard to integrity, chains, serial numbers, checked for tears, cuts links and all other materials
- Hooks to be oiled, not in a fixed position and closed to prevent materials from slipping/falling off
- Lifting equipment must be used for the scope of work carried out

2.48 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.49 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

2.50 Portable Electrical Tools

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.

The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.51 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

2.52 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from onsite activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

2.53 Night Work

The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.

2.54 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.

2.55 Occupational Health

Exposure of workers to occupational health hazards and risks are quite common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin (pores) e.g. painting or use of thinners.

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.

All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

2.56 Suspended Platforms

Not thought to be applicable to this project.

2.57 Material Hoists

Not thought to be applicable to this project.

2.58 Explosive Actuated Fastening Device

Not thought to be applicable to this project.

2.59 Confined Spaces

Confined space work must be closely monitored by a competent person appointed by the contractor, to include, but not restricted to, ensuring that the confined space is sufficiently ventilated prior to entry. Oxygen levels to be tested in confined space to ensure that it is safe for entry. Permit system to be in place to declare confined space safe for entry prior to entry. PPE must be worn (such as proper masks) if air supply is insufficient or not of sufficient quality.

Sufficient training must take place in use of all confined space monitoring and access equipment prior to any works commencing in such confined space. It is strongly recommended that a tripod and winch system be in place to afford easy access and egress and for emergency evacuation from the confined space (manholes and chambers). Please also refer to GSR5 on safety requirements for Work in Confined Spaces.

General safety Regulations 5.

(1) An employer or a user of machinery shall take steps to ensure that a confined space is entered by an employee or other person only after the air therein has been tested and evaluated by a person who is competent to pronounce on the safety thereof, and who has certified in writing that the confined space is safe and will remain safe while any person is in the confined space, taking into account the nature and duration of the work to be performed therein.

(2) Where the provisions of sub regulation (1) cannot be complied with the employer or user of machinery, as the case may be, shall take steps to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when-- (a) subject to the provisions of sub regulation (3), the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and (b) the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.

(3) Where the provisions of sub regulation (2)(a) cannot be complied with, the employer or user of machinery shall take steps to ensure that the confined space in question is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that—

(a) the provisions of sub regulation (2) (b) are complied with;

(b) any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);

(c) at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and

(d) effective apparatus for breathing and resuscitation of a type approved by the chief inspector is available immediately outside the confined space.

(4) An employer or user of machinery shall take steps to ensure that all persons vacate a confined space on completion of any work therein.

(5) Where the hazardous gas, vapour, dust or fumes contemplated in sub regulation (2) are of an explosive or flammable nature, an employer or user of machinery shall further take steps to ensure that such a confined space is entered only if –

(a) the concentration of the gas, vapour, dust or fumes does not exceed 25 per cent of the lower explosive limit of the gas, vapour, dust or fumes concerned where the work to be performed is of such a nature that it does not create a source of ignition; or

(b) such concentration does not exceed 10 per cent of the lower explosive limit of the gas, vapour, dust or fumes where other work is performed.

2.60 Alcohol and drugs (GSR 2)

1. A contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a site.
2. No employee shall be under the influence of or have in his or her possession or partake of or offer any other person intoxicating liquor or drugs.
3. An employer or a user, as the case may be, shall, in the case where a person is taking medicines, only allow such person to perform duties at the site if the side effects of such medicine do not constitute a threat to the health or safety of the person concerned or other persons at such site.

2.61 General Practices when Working at Heights (ladders)

- No Homemade structures or ladders will be permitted on the project.
- Surroundings to be clear of rubble.
- Ladders to be structurally sound and not broken and in accordance to GSR 13A.

2.62 Traffic Management

All traffic signs must be displayed as per the traffic management plan.

Size of signs used must be as per the traffic management drawings and all signs to be visible and in good condition.

- Traffic accommodation Plan issued must be approved by the professional team.
- Plans for signage deployment must be in order and must be placed correctly.
- Traffic accommodation plan must be submitted and must be suitable for the tasks being performed.
- Traffic plan must be implemented and controlled by the sites Responsible Person and flag persons.
- As applicable, road marking buggies/vehicles must be protected by escort vehicles front and rear.

2.63 Ventilation and Lighting in the Workplace

Every employer shall cause every workplace in his undertaking to be lighted in accordance with the illuminance values specified in the Schedule to the General Safety Regulations:

Provided that where specialised lighting is necessary for the performance of any particular type of work, irrespective of whether that type of work is listed in the Schedule or not, the employer of those employees who perform such work shall ensure that such specialised lighting is available to and is used by such employees.

The Contractor must ensure that:

- the average illuminance at any floor level in a workplace within five meters of a task is not less than one fifth of the average illuminance on that task;
- glare in any workplace is reduced to a level that does not impair vision;
- lighting on rotating machinery in such that the hazard of stroboscopic effects is eliminated; and
- luminaires and lamps are kept clean and, when defective, are replaced or repaired forthwith.

With a view to the emergency evacuation of indoor workplaces without natural lighting or in which persons habitually work at night, every employer shall, in such workplaces, provide emergency sources of lighting which are such that, when activated, an illuminance of not less than 0.3 lux is obtained at floor level to enable employees to evacuate such workplaces: Provided that where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance shall be not less than 20 lux.

The contractor must ensure that the emergency sources of lighting prescribed above:

- are capable of being activated within 15 seconds of the failure of the lighting prescribed by sub regulation (1);
- will last long enough to ensure the safe evacuation of all indoor workplaces;
- are kept in good working order and tested for efficient operation at intervals of not more than three months; and
- where directional luminaires are installed, these are mounted at a height of not less than two meters above floor level and are not aimed between 10° above and 45° below the horizontal line on which they are installed.

The contractor must ensure that all rooms, stairways, passageways, gangways, basements, and other places where danger may exist through lack of natural light, to be lighted such that it will be safe.

The contractor must ensure that every workplace in his undertaking is ventilated either by natural or mechanical means in such a way that –

- the air breathed by employees does not endanger their safety;
- the time-weighted average concentration of carbon dioxide therein, taken over an eight-hour period, does not exceed one half per cent by volume of air;
- the carbon dioxide content thereof does not at any time exceed three per cent by volume of air;
- the prescribed exposure limits for airborne substances therein are not exceeded; and
- the concentration therein of any explosive or flammable gas, vapour or dust does not exceed the lower explosive limit of that gas, vapour, or dust.

2.64 Nuclear Density Gauge (Troxler)

Not thought to be applicable to this project.

2.65 Ergonomics Regulation of 2019

"competent person" in relation to ergonomics, means a person who– (a) has in respect of the work or task to be performed the required knowledge, training and experience in ergonomics and, where applicable, qualifications specific to ergonomics: provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and (b) is familiar with the Act and the applicable regulations made under the Act;

"ergonomic risk" means a characteristic or action in the workplace, workplace conditions, or a combination thereof that may impair overall system performance and human well-being;

"ergonomic risk assessment" means a programme, process, or investigation to identify, analyse, value and prioritise any risk from exposure to ergonomic risks associated with the workplace;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimise human well-being and overall system performance;

The ergonomics regulations will apply to any employer or self-employed person who carries out work at the workplace who may expose any person to an ergonomic risk in the work place and any designer, manufacturer, importer or supplier of machinery, plant, or work systems for the work place.

An employer must, before the commencement of any work that may expose employees to ergonomic risks, have an ergonomic risk assessment performed by a competent person.

The ergonomic risk assessment must be done at intervals not exceeding two years and must include the following;

- a complete hazard identification and all persons who may be affected by the ergonomic risk.
- how employees may be affected by the ergonomic risks;
- the analysis and evaluation of the ergonomic risks;
- the prioritisation of ergonomic risks.

An employer must review the relevant ergonomic risk assessment if:

- such assessment is no longer valid;
- control measures are no longer effective;
- technological or scientific advances allow for more effective control methods;
- there has been a change in –
 - the work methods;
 - the type of work carried out; or
 - the type of equipment used to control the exposure; and
- an incident occurs or medical surveillance reveals an adverse health effect, where ergonomic risks are identified as a contributing factor.

An employer must ensure that an employee is placed under medical surveillance, which is overseen by an occupational medicine practitioner, if–

- the ergonomic risk assessment referred to in regulation 6 indicates the need for the employee to be placed under medical surveillance; or
- an occupational health practitioner recommends that relevant employees must be under Medical surveillance, in which case the employer may call upon an occupational medicine practitioner to ratify the appropriateness of such recommendation.

An employer must ensure that the medical surveillance consists of–

- in the case of a new employee, an initial health examination before the employee commences employment or within 30 days of commencement of such employment;
- a periodic health examination informed by the ergonomic risk assessment, at intervals specified by an occupational medicine practitioner, but not exceeding two years; and
- an exit health examination informed by the ergonomic risk assessment.

Both the Client and the Contractor have a duty in terms of health and safety legislation to do all that is reasonably practicable to make members of the public and others being affected by the construction processes aware of possible risks and put preventative measures in place to mitigate the risks. The public and/or visitors shall go through a brief health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks.

OTHER HEALTH AND SAFETY SPECIFICATION REQUIREMENTS

The contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least weekly and before hazardous work is carried out	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by the employer (Contractor) covering: a) Health and Safety Representative Checklist b) Safety report from Safety Officer and Safety Agent
Health and Safety Reports	Monthly	Report covering: a) Incidents/Accidents and Investigations b) Non-conformance c) Health and Safety Training d) HIRA Updates e) Internal and External Audits
General Inspections	As per Health and Safety Specification and OHSA	Report on Health and Safety Specification and OHSA compliance: a) Scaffolding b) Lifting Machinery c) Excavation
General Inspections	Monthly	Covering: a) Firefighting Equipment b) Portable Electrical Equipment c) Ladders
Record keeping	Ongoing	Covering: a) General complaints b) Fines c) General incidents d) MSDS e) Surveillance Medicals f) Inspection Register g) Dept of Labour Notices
Permits	Before commencement with certain activities	As stipulated by the Health and Safety Specification and the OHSA / Construction Regulations

Key:

OHSA – Occupational Health and Safety Act, 1993

ANNEXURE A – REQUIREMENTS FOR THE SAFETY PLAN ASSESSMENT

The Contractor must note that the information below is pertinent to the compilation of their safety plan response to this site-specific safety specification and it would be preferred if the Safety Plan is written in the order of the assessment documented below.

No	Item	Notes
1	Project Directory	Please state details of Project Client, Project Manager/Principal Agent, Safety Agent, Consulting Engineer, etc. (Name, address, contact details).
2	Contractors Directory	Please indicate if you will be using Contractors on this project, if yes, include their details, trade, and FEM details.
3	Other Parties Directory	Please indicate contact details for any services applicable (electricity, water, etc.) as well as Department of Labour and Emergency Services.
4	Project Safety Statement	The Project Safety Statement must be included in the Safety Plan.
5	Health and Safety standards for the project (OHS Act, construction regulations, basic conditions of employment, etc.)	Health and Safety standards must be included in the Safety Plan.
6	Project Particulars	Scope of works must be included in the Safety Plan. This is critical.
7	Existing environment – Structures and Surroundings, Services (Electrical, Water, Sewerage, etc.), Traffic Arrangements, Parking, Access to Site, Storage of Plant and Materials	Please include these items in the plan. The items must be Site Specific, the location of services and services that will be affected must be mentioned.
8	Management Structure for safety on the Project	A structured organogram with names of the responsible people must be included.
9	Appointed Persons, Supervision	The required appointments must be identified. A list of the appointed persons must be included in the Safety Plan.
10	Security Procedures	Please indicate if a security company will be appointed and include the contact information in the Safety Plan.
11	Registers list and inspection frequency	A list of the Inspection Registers that will be on file must be included in the Safety Plan.
12	Design Co-ordination	Please indicate your procedure for implementation of design changes by designer on the project, and the procedures for liaison and implementation of temporary works design on the project.
13	Contractor Co-ordination	Mention must be made of how Contractors will be co-ordinated on site to ensure that they work together and not adversely affected health and safety.

No	Item	Notes
14	Housekeeping, stacking and storage	Housekeeping policies and procedures must be included in the Safety Plan.
15	Waste Disposal Arrangements	Waste disposal arrangements procedures must be included in the Safety Plan.
16	Noise and dust control	Please indicate if any noisy operations (more than 85 decibels) will be carried out and what measures will be used to reduce noise exposure to workforce.
17	Training Requirements	Training requirements must be identified and recorded.
18	Plant and Equipment	A list of plant and equipment to be used on site must be included in the Safety Plan.
19	Safety Monitoring Arrangements	The name, contact details and SACPCMP registration status of the Safety Officer must be included in the Safety Plan. State how often the Safety officer will be on site (note safety specification requirement in section 1.7).
20	Information for Contractors	State how information will be given to Contractors on site.
21	Consultation/communication arrangements with Employees	State how information will be given to employees e.g. notice board.
22	Selection of Contractors Procedures	Principal contractor must state what health and safety procedures they will use to assess the competence and resources of their contractors on site.
23	Activities with risk to Health and Safety (Risk Assessment)	A Baseline Risk Assessment must be included in the Safety Plan, it must address the Risks identified in the Safety Specification as well as the risk of any other hazards that the Principal Contractor is aware of that are relevant to the site.
24	Hazardous Substances	Must be listed in the Safety Plan and addressed in the Risk Assessment.
25	First Aid and Medical Procedures	Please indicate name of first aider, position of first aid box, location of nearest medical facility and emergency numbers.
26	Fire and Emergency Procedures	List of emergency telephone numbers must be drawn up and included in the Safety Plan. The position of Fire Extinguishers, Assembly Point location, fire drill frequencies, numbers of fire marshals, etc.
27	Accident and Incident Reporting and investigation	State the Accident and Incident Reporting and investigation procedures of your company.
28	Welfare and Site Facilities	Elaborate on toilets and eating areas, water provision, ablution provision, how will workers be protected during wet weather conditions etc.
29	Site Rules	The Site Rules must be included in the Safety Plan.
30	Personal Protective Equipment	The necessity must be identified by Risk Assessments, the required PPE for site risks and control measures.
31	Health & Safety File arrangements	Please indicate arrangements for the return of the Health and Safety File to the safety agent at the end of the project.

No	Item	Notes
32	Method Statements/Safe System of Works	A list of Method Statements/Safe System of Works must be included in Safety Plan for all High-risk activities.
33	Permits and wayleaves	List of activities that Principal Contractor anticipates will require permits and wayleaves (including those stated in the safety specification) to be included.
34	Fall Prevention and Protection Plan and Fall Rescue Plan	A copy of the Fall Prevention and Protection Plan, fall rescue plan and fall risk assessment must be included in the Safety Plan.
35	Demolition method statement	A copy of the Demolition Method Statement must be included in the Safety Plan.
36	Confined spaces	The Principal Contractors' procedures for managing access, egress and work in confined spaces must be specified in the Safety Plan. Includes permit procedures, air monitoring, PPE, etc.
37	Safety Representatives and Safety Committees	When a project has more than 20 employees a designated employee must be chosen by the labourers to represent them. A safety committee must be established if 2 or more safety representatives are appointed. Please note Safety Specification requirements regarding this section (section 2.12).
38	Have the significant hazards from the safety specification been addressed?	See section 1.9 of the Specifications and ensure practical measures have been detailed in the safety plan.
39	Safety File - Safety Policies in File and Signed by 16(1) CEO.	Safety Policies must be signed and explained to employees.
40	Safety File - A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.	A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.
41	Safety File - Signed copy of the 37.2 Mandatory Agreement	A 37.2 Mandatory Agreement needs to be signed between the Client and the Principal Contractor.
42	Safety File - Appointment letter from Client (as well as 5.1.K)	The Client must appoint the Principal Contractor in writing.
43	Safety File – Notification / Permit	A copy of the Annexure 2 Notification (and proof of submission) to Department of Labour must be available. This can be in the form of a Department stamp, email, or copy of Construction Work Permit.

ANNEXURE B – LEGAL APPOINTMENTS

The contractor shall make the following appointments, as required:

Chief Executive Officer (OSH Act 16(1))
Contract Director/Manager (OSH Act 16(2))
Construction Manager (CR 8(1))
Construction Supervisor (CR 8(7))
Assistant Construction Supervisor (CR 8(8))
Construction Safety Officer (CR 8(5))
Traffic Safety Officer
Safety Representative (where > 20 employees on site)
Temporary work Designer (CR 12(1))
Temporary work Supervisor (CR12(2))
Construction risk assessor (CR 9(1))
Excavation Supervisor (CR13(1)(a))
Demolition Supervisor (CR14(1))
Scaffold Supervisor (CR16(1))
Suspended Platform Supervisor (CR17(1))
Material Hoist Inspector (CR19(8)(a))
Material Hoist Operator (CR19(6))
Bulk Mixing Plant Supervisor (CR20(1))
Bulk Mixing Plant Operator (CR20(2))
Controller of Explosive Actuated Fastening Devices Nails, Cartridges or Studs Issue and Collection (CR21(2)(g)(1))
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))
Controller of Temporary Electrical Installations (CR24(c))
Stacking Supervisor (CR28(a))
Fire Extinguishing Equipment Inspector (CR29(h))
Fall Protection Plan Developer (CR 10(1)(a))
Incident Investigator (OSH Act 9(2))
Competent Person – Confined Spaces (GAR 5(1))

ANNEXURE C - BASELINE RISK ASSESSMENT FOR PROJECT

Irrespective of the risk presented on site, it will be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

	HAZARD	RISK	MINIMUM CONTROL MEASURES
1.	Compacting and Filling	Contact with tipping materials Contact with moving plant Vehicles/personnel falling into excavations Contact with underground services	- Trained banksman to control vehicles movement - Only trained personnel use plant - Personal Protective Equipment to be worn - Personnel to stand clear as materials are being tipped - Use stop blocks and signs to warn vehicles of excavations, where applicable - Stand clear of plant whilst materials are being compacted - Establish position of underground services and protect services from damage
2.	Compactor Operations	Crushing of feet	- Only trained and competent personnel to use the machine - Ensure operative wears steel toe cap shoes or boots at all times
3.	Confined Spaces	Suffocation Fumes	- Ensure that confined space is sufficiently ventilated - Wear personal protective equipment such as proper masks if air supply insufficient or not of sufficient quality - Test oxygen levels in confined space to ensure that is safe for entry - Ensure that emergency procedures in place
4.	Cutting Off Disc	Noise Cuts from machine Fire (particularly at refuelling) Flying debris Blade shattering Contamination by fume created or exhaust fume	- Use competent personnel. - Hot works control- fire extinguisher, fire watchman. (Permit may be required) - PPE to include gloves, eye protection, hearing protection - Solid working position. - Clear working area - Correct grade of blade must be used. - Good ventilation to be provided (forced if necessary). - Changing of wheels to be by competent persons only - Cut off discs must not be used for grinding (grinding disc thicker) - Bystanders to wear hearing protection, as applicable
5.	Electric Tools and Electrical Installations	Electric shock Fire	- Electric tools and installations to be in good condition - Inspect electric tools before use - Do not use electric tools in wet/damp conditions - Use personal protective equipment such as insulated gloves - Electrical installations register to be maintained, inspected by competent person
6.	Excavations (Working in and around)	Toxic fumes Collapse of trench walls/trapping Falling into excavation Collapse of adjacent structures	- Deep excavations / monitor air for toxic fumes - Prevent collapse by battering back sides to a safe angle or install temporary support - Protect vehicles from falling into excavations – provide barriers, signage, etc. as necessary - Beware of undermining of other structures (e.g. buildings, scaffolds) - Record excavation inspections by competent person on daily basis - Provide suitable means of access/egress in case of emergency. - Excavations formed by explosives must be accompanied by method statement approved by Client
7.	Fire	Injuries to workers, pedestrians,	No littering on site which could become fire hazard,

	HAZARD	RISK	MINIMUM CONTROL MEASURES
		residents, road users, damage to property through fire	- maintain site in clean condition. - No fires to be lit on site. Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices
8.	Flammable Liquids and Gases (Use of)	Fire Explosion	- No littering on site which could become fire hazard, maintain site in clean condition. - Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices - Equipment must be in good condition, maintained - Personnel using substances must be trained in safe use and risks
9.	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	- Ensure: - Tool is correct for job - Tool is in good order and suitably sharp - Personnel must be competent/instructed in tool usage and tool safely - Lighting is sufficient - Access is safe, working platform is secure, leading edge is guarded - Operative is wearing all necessary PPE
10.	Hazardous Substances	Injuries to workers through use of hazardous substances, e.g. injuries to eyes, skin, etc.	- Use substances in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc.) - Know what First Aid measures are - Have welfare facilities available for washing of hands, etc.
11.	Hot Works	Burns to eyes or other parts of the body	- Personal Protective Equipment to include eye, skin, and hearing protection - Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. Dust can also be a problem and forced ventilation may be required.
12.	Manual Handling of General Items	Muscular skeletal injuries if the load is too heavy or awkward Operative falling/ tripping Contamination from the substance being carried Fall of material being carried	- Personnel should be aware of safe manual handling techniques - Personnel to wear Personal Protective Equipment when carrying items, e.g. safety footwear and gloves. - Ensure good housekeeping against tripping/fall hazards. - Operative to get assistance if load too heavy- team lift if necessary. - Utilise mechanical lifting and carrying aids where possible. - Personnel to ensure access equipment, ladders will take weight of operative and load being carried. - Personnel to ensure item being carried is properly bonded or is not be liable to break apart whilst being manually handled.
13.	Members of Public – Protection of	Injury to member of public and road users from site works	- Barriers and signage to be in place - Workers must warn away any members of public from the works - Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public - Traffic turning into site – traffic management and signage as required. - Signage to be on road at site entrance warning motorists that construction traffic turning into/out of

	HAZARD	RISK	MINIMUM CONTROL MEASURES
			site access. Keep roads free of mud where possible - Refer to plant risk assessment for details on plant safety precautions - NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PRIVATE HOMEOWNERS MUST BE AGREED.
14.	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	- Wear respiratory and hearing protection - Dampen down and minimise dust where possible.
15.	Plant or Vehicles and Equipment Operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	- Implement traffic protection measures - Trained and competent operators must be used - Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition. - Medical certificates of fitness required for construction plant. - Crossing of road by construction vehicles or machines must be limited to the practical minimum - Plant and vehicles must be fitted with amber rotating beacons and reverse alarms. - Wear appropriate protective clothing/equipment, e.g. goggles, gloves, ear defenders, etc. as appropriate.
16.	Road Working – working in or next to road	Injury to workers caused by passing traffic Injury to road users and pedestrians by works	- Flagmen to be used where interface with construction plant with passers-by or where hazard posed by delivery vehicles turning into/out of site. - Traffic management plan to be approved by Municipality and, if necessary, traffic department - No construction activities to commence until adequate provision made to accommodate traffic in accordance with the South African Traffic Signs Manual. - Use safety signage to warn traffic and pedestrians of construction works - Where existing walk ways/pavements affected by works, must direct pedestrian traffic away to safe walking area. - Wear reflective waistcoats when working on or near the road or road shoulder as well as any other required personal protective clothing. - Crossing of road by personnel must be limited to the practical minimum - Use of fencing or other barriers as appropriate
17.	Working with Effluent	Contact with effluent causing sickness or disease	- ensure good hygiene facilities - personnel to be competent in work activity - personnel to wear appropriate personal protective equipment such as goggles, overall, gloves and goggles
18.	Live Services	Striking of live services	- Make all necessary enquiries to establish what services are in the area. Consult drawings and advice from service provider (e.g. Municipality or ESKOM) when planning work. - Assume all service to be live (Unless confirmation is received to confirm that services are isolated or otherwise made safe). Do not work near live services without authorisation from site management. - Comply with the requirements of the safe system of work for underground services. - Where available, locate services with a locator - Hand dig around services

Date of Original Safety Specification Compilation	Compiled By	Issue Date
tbc	tbc	tbc

Revision Summary	Revised By	Revision Date

I, _____ representing
_____(Contractor), have
satisfied myself with the content of this Health and Safety Specification and shall ensure that
our employees and contractors on site comply with the requirements of this document, our
safety documentation and health and safety legislation.

Comments:

LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C3.6 Annexes

CONTENTS

Annex 1: Monthly Project Labour Report

Annex 2: B-BBEE Sub-Contract Expenditure Report

Annex 3: Joint Venture Expenditure Report

Annex 4: Targeted Labour Contract Participation Expenditure Report

Annex 5: Targeted Enterprises Contract Participation Expenditure Report

Annex 6: As-Built Processes - Protocols

ANNEX 1

LANGEBERG MUNICIPALITY

BENEFICIARY INFORMATION													
DISTRICT MUNICIPALITY NAME		Cape Winelands											
LOCAL MUNICIPALITY		Langeberg Municipality											
PROJECT NAME													
PROJECT NUMBER													
CONTRACT NUMBER													
CONTRACTOR													
SUBMISSION DATE													
													
2023													
January													
First name	Initials	Last name	I.D. Number	DOB dd/mm/yyyy	Gender M or F	Has disability Y or N	Education level See codes at bottom of list	Start date dd/mm/yyyy	End date dd/mm/yyyy	Number of labour days for March 2022	Daily wage rate for September	Total wages paid for October DO NOT ENTER DATA IN THIS COLUMN	Employee signature confirming receipt of wages for March
1												0	
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
TOTALS (DO NOT ENTER DATA IN THIS LINE)										0		0	
Education Levels – use the codes (1,2,3 etc) on the excel spreadsheet													
1	Unknown	3	Grade 1-3 (Sub A – Std 1)	5	Grade 5-6 (Std 3-4) ABET 2	7	Grade 8-9 (Std 7) ABET 4	9	Grade 12 (Std 10)				
2	No Schooling	4	Grade 4 (Std 2) ABET 1	6	Grade 7-9 (Std 5-6) ABET 3	8	Grade 10-11 (Std 8-9)	10	Post Matric				
CONTRACTOR NAME OF SIGNATORY: _____ SIGNATURE _____ DATE: _____													
IMPLEMENTING AGENT NAME OF SIGNATORY: _____ SIGNATURE _____ DATE: _____													
PROJECT MANAGER NAME OF SIGNATORY: _____ SIGNATURE _____ DATE: _____													

EPWP - PROJECT REPORTING



Reporting on the
30th OF EVERY
MONTH

Project Name	
Project Number	
Service Provider	
Description of Project	
Start Date of Project	
End Date of Project	
MIG NUMBER :	
Quantity	
Town	
Financial	
Budget	
Monthly Expenditure	
Expenditure To date	
Main Funder	
Secondary Funder	

Contact Details of Project Manager

Name & Surname	Neil Albertyn
Office Number & Fax	023 626 8200
Email	nalbertyn@langeberg.gov.za
Cellphone	082 894 7906

TRAINING

Name of Training Course	None
Number of Trainees	None
Outcome	None

PLANNED TRAINING

Name of Training Course	No training will be provided or planned for this project?
Number of Trainees	
Start Date	
End Date	

Output Planned (Progress)

Output Actual (Progress)

Detailed description of work completed		Description (what has been done)	
Quantity (how much has been done)		Quantity (how much has been done)	
Unit of Measurement	Construction / Expenditure	Unit of Measurement	Construction / Expenditure

Con

ANNEX 2

LANGEBERG MUNICIPALITY

CONTRACT NO. AND NAME:

CONTRACTOR:

B-BBEE SUB-CONTRACT EXPENDITURE REPORT BASED ON PAYMENT CERTIFICATE NO.

Value of the contract (as defined in the Preference Schedule) (P*)	R	B-BBEE Status Level of Prime Contractor	
--	---	---	--

Name of Sub-contractor (list all)	B-BBEE Status Level of Sub-contractor ¹	Total value of Sub-contract (excl. VAT) ¹	Value of Sub-contract work to date (excl. VAT) ¹	Value of Sub-contract work to Sub-contractors with a lower B-BBEE Status Level than Prime Contractor
Sub-contractor A		R	R	R
Sub-contractor B		R	R	R
Sub-contractor C		R	R	R
Total:				R
Expressed as a percentage of P*				%

¹Documentary evidence to be provided

Signatures

Declared by Contractor to be true and correct:

Date:

Verified by Employer's Agent / Representative:

Date:

ANNEX 3

LANGEBERG MUNICIPALITY

CONTRACT NO. AND NAME: _____

CONTRACTOR: _____

JOINT VENTURE EXPENDITURE REPORT BASED ON PAYMENT CERTIFICATE NO.

Value of the contract (as defined in the Preference Schedule) (P*)	R	B-BBEE Status Level of Joint Venture	
--	---	--------------------------------------	--

Name of Joint Venture partner (list all)	B-BBEE Status Level of each JV partner as at contract award	Percentage contribution of JV partner per JV Agreement ¹ A	Total value of JV partner's contribution (excl. VAT) ¹ B = A% x P*	Value of JV partner's contribution to date (excl. VAT) ¹ C	Value of JV partner's contribution as a percentage of the work executed to date D = C/P*x100
JV Partner A		%	R	R	%
JV Partner B		%	R	R	%
JV Partner C		%	R	R	%

¹Documentary evidence to be provided

Signatures

Declared by Contractor to be true and correct: _____

Date: _____

Verified by Employer's Agent / Representative _____

Date: _____

ANNEX 4

LANGEBERG MUNICIPALITY

CONTRACT NO. AND NAME:

CONTRACTOR:

TARGETED LABOUR CONTRACT PARTICIPATION EXPENDITURE REPORT BASED ON CERTIFICATE NO.

Value of the contract (as defined in the Preference Schedule) (P*)	R	Specified Targeted Labour Contract Participation Goal	%
---	---	---	---

Name of Contractor/Sub-contractor (list all)	Total previous expenditure on wages in respect of targeted labour	Net Amount for this month ¹	Total expenditure on wages in respect of targeted labour
Contractor	R	R	R
Sub-contractor A	R	R	R
Sub-contractor B	R	R	R
¹ Documentary evidence to be provided			Total: R
			Expressed as a percentage of P* %

Signatures

Declared by Contractor
to be true and correct:

Date

Verified by Employer's
Agent / Representative

Date

ANNEX 5

LANGEBERG MUNICIPALITY

CONTRACT NO. AND NAME:

CONTRACTOR:

TARGETED ENTERPRISES CONTRACT PARTICIPATION EXPENDITURE REPORT BASED ON CERTIFICATE NO.

Value of the contract (as defined in the Preference Schedule) (P*)	R	Specified Targeted Enterprises Contract Participation Goal	%
--	---	--	---

Name of targeted enterprise (list all)	Total previous expenditure (excl. VAT) to targeted enterprises	Net Amount for this month ¹	Total expenditure (excl. VAT) to targeted enterprises
Targeted Enterprise A	R	R	R
Targeted Enterprise B	R	R	R
Targeted Enterprise C	R	R	R
¹ Documentary evidence to be provided			Total: R
			Expressed as a percentage of P* %

Signatures

Declared by Contractor
to be true and correct:

Date

Verified by Employer's
Agent/
Employer's Agent's
Representative:

Date

ANNEX 6

As-Built Protocol (Check List)	
The following protocols regarding civil “as built” plans and GIS data are implemented by the City of Cape Town	
08022019	WATER AND SANITATION DEPARTMENT
Version: 001	
Compiled By: SPO	
Approved By: Manager Ref: WS/RET/REG/017	
	As-built data should be supplied to the CITY OF CAPE TOWN in <u>GIS</u> and <u>CAD</u> and <u>Hardcopy formats</u> , and comply with prescribed survey standards. 1) AS BUILT PLANS 2) GIS DATA FORMAT / STANDARDS 3) CAD 4) SURVEY
	1) AS-BUILT PLANS
☐	1.1 Two (2) sets of “as built” services layout plans (Scale 1 : 500), including longitudinal sections if applicable, be provided and loosely rolled up. (to be printed on Hydromat Film OR Coated Paper)
☐	1.2 The hard copies should be on standard sheet sizes. Hard copies should not be larger than A0. A1 paper size is preferred.
☐	1.3 No Telkom or electrical data should appear on the civil “as built” plans or digital data, unless requested by the City of Cape Town.
☐	1.4 As-Built drawings: <i>Services should be separated on the drawings as follows:</i> - Water Layout (excluding contours) - Sewer Layout (excluding contours) - Roads and Storm water Layout (including contours) - Roads and Traffic Signage Layout - Combined Services (water, sewer and storm water) (excluding contours) - Electrical and Telkom (on request)
☐	1.5 The following information needs to be clearly indicated on all drawings: All appropriate Map Layout features o Title Block o Clear Legends indicating all services o North sign o Scale
☐	1.6 Date – of all revisions should be indicated and final “as built” date.
☐	1.7 The Name of Development / Suburb.
☐	1.8 Where there are various phases, it should be shown clearly on a Locality insert map
☐	1.9 Street names (if available).
☐	1.10 The correct erf numbers on the erven if available from the Surveyor General
☐	1.11 Servitudes and their widths.
☐	1.12 Revision number (A-Z) With “as built” as revision ZZ . Final plan clearly indicated as "As-built" and marked as revision ZZ.
☐	1.13 The name in full and signature of the responsible project manager, contact details, as well as the names of the clients, consultants, contractor and Project number should be on the “as built”.
☐	1.14 The ownership, regarding “Municipal or Private” services should be clearly indicated.

☐	1.15 That all features and attribute data, i.e. pipes/leadings/valves/fittings and diameter/class, materials, slopes, lengths, cover and invert levels be clearly indicated on the drawings, positioned at the entity.
☐	1.16 The type of valves and hydrants indicated on the plan
☐	1.17 Accurate dimensions for all services
☐	1.18 Co-ordinate lists (ASCII /Excel file) of the valves, fire hydrants, manholes, meter positions, leading end cap, etc. should appear on the plan and to be digitally handed over to the Council.
☐	1.19 A table, indicating the total length of New Pipes/Relays for the different pipe diameters, class and types.
☐	1.20 Bulk Water Meter details (Location XY, size)
☐	1.21 The new “as-built” data should not be indicated as “proposed”.
	Disclaimer: <i>It is the responsibility of the contractor to verify the locations of the Water and Sanitation infrastructure in the field, as supplied to them by the CCT, before the start of construction and to immediately brought any discrepancies/ anomalies to the attention of the Water and Sanitation department.</i>
	2) GIS GIS DATA FORMAT / STANDARDS
☐	2.1 The GIS data must be produced and provided in the following projection: Map Projection: Gauss Conformal (Transverse Mercator) Datum: Hartebeeshoek 94 Spheroid: WGS 84 Scale Factor: 1 Central Meridian: 19 Units: International Meter
☐	2.2 Spatial data should be supplied to the CITY OF CAPE TOWN in the following formats: <i>When NO Geodatabase has been provided by the Municipality:</i> o Data to be submitted in ESRI GIS formats: ArcGIS File Geodatabase <u>or</u> Personal Geodatabase <u>or</u> Shape files (*.shp); with attributes containing pipe diameters /class, length, capacity, material, CL/IL (height values must be referenced to Mean Sea Level), consultant etc. o All field names must be understandable and, if provided as a Shapefile, the field names must be shorter than eight characters. o If the field name is more that one word, underscores must be used e.g. Facility_Name o Metadata explaining the field names and field parameters must be provided <i>When an empty Geodatabase was provided by Water & Sanitation GIS</i> o Capture all data and relevant fields as specified in the tender specifications o If any other spatial data (Except for the feature classes provided) is included in the final deliverable this data should be in a feature dataset o Data must be captured with the cadastral file used as background reference o All raster data and symbolize layers must be excluded from the geodatabase and provided in a separate folder
☐	2.3 Topology: <i>All data supplied to the CITY OF CAPE TOWN should have spatial topology.</i>

	o The capturing direction of line features (pipes) must reflect the gravity (flow) direction of the sewer pipe. (Capture in the Flow Direction of the Pipes.)
	o Connectivity must be complete; stipulating that all connected features snaps accurately to one another with no under- or over shoots, point-to-line and line-to-line.
	o The drawing must be “topologically clean” with no duplication of features.
	3) CAD
☐	3.1 <u>Cross Sections</u> , <u>Longitudinal Sections</u> and <u>Detail Drawings</u> are required in CAD format.
☐	3.2 “As built” drawings in electronic AutoCad.dxf format is preferred, or alternatively AutoCad.dwg (version 2000 or older). At least two drawing formats must be provided e.g. Dxf and AllyCad.drg or Dxf and AutoCad.dwg – AND in Pdf format.
☐	3.3 The CAD drawings should be drawn BY LAYER and not BY COLOR and the layer names must be descriptive and just and containing not more than 8 digits. (Each theme type must be drawn on a different layer.)
☐	3.4 No “YELLOW” colour of layers will be accepted.
	4) SURVEY
☐	4.1 It is the responsibility of the contractor to verify the locations of the Water and Sanitation infrastructure in the field, as supplied to them by the CCT, before the start of construction and to immediately bring any discrepancies/ anomalies to the attention of the Water and Sanitation department.
☐	4.2 Post construction survey of the centre points of all surface features (valves, fire hydrants, manholes, meter positions etc), including pipe bends, endcaps, tee's and crosses as part of “as built” information.
☐	4.3 Reference points such as "Town Survey Marks" and "Working Stations" used during As-Built survey to be listed on the plan in the following format: Name, Y coord, X coord, Z value, Description
☐	4.4 Height values must be referenced to Mean Sea Level (MSL) if MSL controll points are available.
☐	4.5 Surveyor signature to be present on all As Built plans
☐	4.6 “As Built” to be completed and handed over on final inspection to the person representing the City of Cape Town. As Built completion and acceptance by the CCT is a requisite before the release of the final contract payment.
☐	The complete electronic data set must be provided in CD/DVD/USB Media with the name of the development, the mother erf number and the consultants company name and contact details clearly indicated on both the cover and the CD disk.

Part C4: Site information

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LANGEBERG MUNICIPALITY

INFRASTRUCTURE SERVICES

CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C4 Site Information

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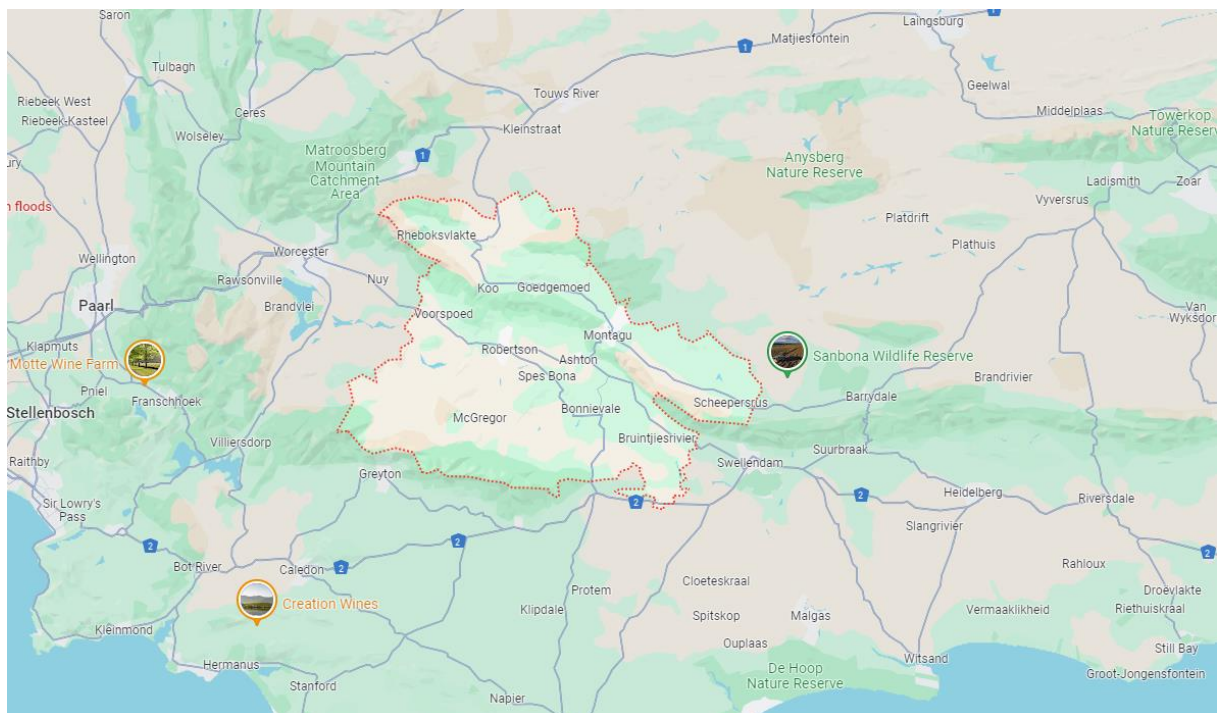
1. GENERAL
2. WORKS PROJECTS

1. GENERAL

The sites for the Works are those areas which may be identified within the Langeberg municipal area in which Works Projects are to be executed. See the map on the next page.

2. WORKS PROJECTS

Site specific information will be specified, as required, in the Works Project contract document for a particular Works Project.



LANGEBERG MUNICIPAL AREA

Part C5: Drawings

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LANGEBERG MUNICIPALITY
 INFRASTRUCTURE SERVICES
 CONTRACT NO. T36/2024

T36/2024 CONSTRUCTION TENDER: PIPE REPLACEMENT USING CONVENTIONAL AND TRENCHLESS METHODS, (RATES BASED), FOR A PERIOD OF THREE (3) YEARS

C5 Drawings List

The Works shall be carried out in accordance with the following drawings which are included in Volume 4 Drawings and form part of the contract documents:

DRAWING NAME	DRAWING DESCRIPTION
STANDARD DETAIL DRAWING SMFC1	SEWER MANHOLE CEMENT FIBRE
STANDARD DETAIL DRAWING SMB1	MANHOLE / INSPECTION CHAMBER
STANDARD DETAIL CB1	CONTRACT BOARD
STANDARD DETAIL FH1	FIRE HYDRANT
STANADARD DETAIL 1	TRENCH / MARKER / VALVES
STANDARD DETAIL 2	HOUSE CONNECTIONS / THRUST BLOCKS
STANDARD DETAIL VC 1	VALVE CHAMBER