



Documents may be obtained,  
free of charge, in electronic format,  
from the eTenders website.

Reference is to be made to  
Clause F.1.2 of the  
Tender Data.

**WATER AND SANITATION  
ENGINEERING**

**PROCUREMENT DOCUMENT  
INFRASTRUCTURE**

**CONTRACT No.: WS7190**

**TITLE: ESCOMBE – WALL ROAD SEWER RETICULATION**

**Clarification Meeting: A Compulsory clarification meeting will be held at the cul-de-sac of  
Jacobs Place in Escombe on 1 June 2022 at 10am**

Issued by:

**WATER AND SANITATION  
ENGINEERING**

Date of Issue: May 2022

**Document Version: 01/03/2022**

NAME OF TENDERER: .....

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**PART T1: TENDERING PROCEDURES**  
**T1.1: TENDER NOTICE AND INVITATION TO TENDER**

Tenders are hereby invited for the works to construct sewer reticulation for 65 properties in the area of Escombe, which will include pipe jacking underneath the M7 Highway.

(F.1.1.1) The Employer is the eThekweni Municipality as represented by Deputy Head: Engineering

It is estimated that tenderers should have a CIDB contractor grading designation of 5 CE (or higher).

(F.1.2) Documents can be obtained in electronic format, issued by the eThekweni Municipality:

- Electronically downloaded documentation is obtainable from the National Treasury's eTenders website or the eThekweni Municipality's Municipality. The entire document should be printed and suitably bound by the tenderer.

(F.2.7) There will be a Compulsory clarification meeting will be held at the cul-de-sac of Jacobs Place in Escombe on 1 June 2022 at 10am – All COVID-19 regulations to be adhered to.

(F.2.8) Queries relating to these documents may be addressed to the Employer's Agent's Representative whose contact details are: Sizwe Dlamini , 031 311 8978 (t) , Sizwe.Dlamini@durban.gov.za

(F.2.13) Tender offers shall be delivered to the Municipal Building, 166 K.E. Masinga Road and placed in the tender box located in the ground floor foyer.

(F.2.15) Tender offers shall be delivered on or before Friday, 10 June 2022 at or before 11:00

**Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data**

**PART T1: TENDERING PROCEDURES****T1.2: TENDER DATA****T1.2.1 STANDARD CONDITIONS OF TENDER**

The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the CIDB Standard for Uniformity in Construction Procurement (July 2015) as published in Government Gazette No 38960, Board Notice 136 of 2015 of 10 July 2015.

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.

**T1.2.2 TENDER DATA**

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

**F.1: GENERAL**

**F.1.1 The employer:** The Employer for this Contract is the eThekweni Municipality as represented by: Deputy Head: Engineering

**F.1.2 Tender documents:** The Tender Documents issued by the Employer comprise:

- 1) This procurement document.
- 2) Drawings, issued separately from this document (or alternately: Bound in Section C3.4 as an Annexure).
- 3) “General Conditions of Contract for Construction Works – 3<sup>rd</sup> Edition 2015” issued by the South African Institution of Civil Engineering (GCC 2015). This document is obtainable separately, and Tenderers shall obtain their own copies.
- 4) SANS 1200: Standardized Specifications for Civil Engineering Construction, hereinafter referred to as SANS 1200. This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections.
- 5) In addition, Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations, and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and the participation of targeted enterprise and labour.
  - The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).
  - The Construction Industry Development Board Act No 38 of 2000 and the Regulations issued in terms of the Act (July 2013).
  - The Preferential Procurement Policy Framework Act No 5 of 2000.
  - SANS 1921:2004 – Construction and Management Requirements for Works Contract, Parts 1-3.
  - The Employer’s current Supply Chain Management Policy.
  - Any other eThekweni Policy documents referenced in the Tender Documents.

Electronically downloaded documentation is obtainable from the National Treasury’s **eTenders Website** or the eThekweni Municipality’s **Vendor Portal** at URLs:

- <https://ethekwinivendor.durban.gov.za/tenders/availabletenders/> ; or
- <https://etenders.treasury.gov.za/>

The entire downloaded document should be printed and suitably bound by the tenderer.

**F.1.4 The employer's agent:** The Employer's agent is

- Philip Bosch Pr. Eng
- Tel: 031 311 8658 (t)
- Email: Philip.Bosch@durban.gov.za

The tenderer's contact details as indicated in the Contract Data under Clause C1.2.2.2 "Data to Be Provided by Contractor" shall be deemed as the only applicable contact details for the tenderer for use in communications between the employer's agent and the tenderer after the closing time stated in the Tender Data.

## F.2: TENDERER'S OBLIGATIONS

**F.2.1 Eligibility:** A Tenderer will not be eligible to submit a tender if:

- (a) the Tenderer does not comply with the legal requirements as stated in the Employer's current SCM Policy;
- (b) the Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract;
- (c) In the event of a Compulsory Clarification Meeting:
  - i) the Tenderer fails to attend the Compulsory Clarification Meeting;
  - ii) the Tenderer fails to have form "Certificate of Attendance at Clarification Meeting / Site Inspection" (in Part T2.2) signed by the Employer's Agent or his representative.
- (d) in the case of JV submissions, two or more JV entities have common directors / shareholders or common entities tendering for the same works.
- (e) at the time of closing of tenders, the Tenderer is not registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.
- (f) If the tenderer is required by law to prepare annual financial statements for auditing, the tenderer must submit their audited annual financial statements:
  - i) for the past three years; or
  - ii) since their establishment if established during the past three years;

**F.2.1.1 Eligibility:** Only those tenderers who are registered (as "Active") with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a CE class of construction work, are eligible to have their tenders evaluated.

Joint ventures are eligible to submit tenders provided that:

- (a) Every member of the joint venture is registered (as "Active") with the CIDB (at time of tender closing);
- (b) The lead partner has a contractor grading designation in the CE class of construction work and has a grading designation of not lower than one level below the required grading designation; and
- (c) The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations (2013) is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a CE class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

**F.2.2.2 The cost of the tender documents:** Replace this paragraph with the following:

"Documents may be obtained, free of charge, in electronic format, from the National Treasury's

eTenders website or the eThekweni Municipality's Vendor Portal. The entire electronically downloaded document should be printed and suitably bound by the tenderer.

**F.2.6 Acknowledge addenda:** Add the following paragraphs to the clause:

"Addenda will be published, in electronic format, on the National Treasury's eTenders website (see F.2.2.2 above). Tenderers are to ensure that the eTenders website is consulted for any published addenda pertaining to this tender until three days before the tender closing time as stated in the Tender Data."

"Acknowledgement of receipt of the addenda will be by the return of the relevant completed, dated and signed portion of the addenda, to the address / fax number / email address as specified on the addenda. Failure of the tenderer to comply with the requirements of the addenda may result in the tender submission being made non-responsive."

**F.2.7 Clarification meeting:** There will be a Compulsory clarification meeting will be held at the cul-de-sac of Jacobs Place in Escombe on 1 June 2022 at 10am

In the event of a Compulsory Clarification Meeting, Tenderers must sign the attendance register in the name of the tendering entity. Addenda will be issued to, and tenders will be received only from, those tendering entities appearing on the attendance list.

**F.2.12 Alternative tender offers:** No alternative tender offers will be considered.

**F.2.13 Submitting a tender offer:** Submissions must be submitted on official submission documentation issued (in electronic format) by the eThekweni Municipality.

Identification details to be shown on each tender offer package are:

- Contract No. : WS7190
- Contract Title : ESCOMBE – WALL ROAD SEWER RETICULATION

The Employer's address for delivery of tender offers is:

the Municipal Building, 166 K.E. Masinga Road  
and placed in the **Tender Box** located in the ground floor foyer.

Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.

**F.2.15 Closing time:** The closing time for delivery of tender offers is:

- Date : Friday, 10 June 2022
- Time : 11:00

**F.2.16 Tender offer validity:** The Tender Offer validity period is 24 weeks (168 Days) from the closing time for submission of tenders.

**F.2.20 Submit securities, bonds, policies:** The tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part T2.2 of this procurement document.

**F.2.23 Certificates:** Refer to Part T2.1 for a listing of certificates that must be provided with the tender. All certificates must be valid at the time of tender closing.

#### **CIDB Registration**

Tenderers are to include with their submission a printout of their registration with the CIDB, obtained from the CIDB website ( <https://registers.cidb.org.za/PublicContractors/ContractorSearch> ).

The Joint Venture Grading Designation Calculator should be used when submitting as a Joint Venture ( <https://registers.cidb.org.za/PublicContractors/JVGradingDesignationCalc> ).

The date of obtaining the above printouts is to be indicated on the printout. Registration with the CIDB must be reflected as “Active” at time of tender closing.

**Tax Clearance**

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer’s real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

**B-BBEE Status Level of Contribution**

The Amended Construction Sector Code (Government Gazette No.41287) is applicable to the B-BBEE compliance measurement of all entities that fall within the Construction Sector.

The requirements for measurement and verification of entities are contained in the “Amended Code Series CSC000: Framework for Measuring Broad Based Black Economic Empowerment in the Construction Sector”, as published in Notice 931 of 2017, Government Gazette No.41287 of 01/12/2017.

The requirements are summarised in the following table:

| Enterprise Type  | Total Annual Revenue (R million) | Ownership and Annual Turnover  |
|--|----------------------------------|--|
| EME: Built Environment Professional  | < R1.8m                          | May present an <b>affidavit</b><br>OR<br>a <b>certificate</b> issued by the CIPC<br>OR<br>authorised <b>B-BBEE verification certificate</b> (as below) |
| EME: Contractor  | < R3.0m                          |  |
| Reference should be made to Cl.3.6.2.4.1 of the Amended Construction Sector Code regarding the above exceptions. |                                  |  |
| EME: Built Environment Professional  | < R6m                            | Must present an authorised <b>B-BBEE verification certificate</b> by a SANAS accredited Verification Agency  |
| EME: Contractor  | < R10m                           |  |
| QSE: Built Environment Professional  | ≥ R6.0m and < R25m               |  |
| QSE: Contractor  | ≥ R10.0m and < R50m              |  |
| Large Enterprise   | >R50m                            |  |

The requirements for measurement of Joint Ventures is described in Cl.2.8 of the Amended Construction Sector Code. The compilation of a consolidated verification certificate is required.

B-BBEE Verification Certificates must be from a Verification Agency accredited by the South African National Accreditation System (SANAS).

**Central Supplier Database (CSD)**

The entities (full) Registration Report, obtained from the National Treasury Central Supplier Database, is to be included in the tender submission ( <https://secure.csd.gov.za> ).

Separate CSD Registration Reports are required for each entity in a Joint Venture.

**F.3: THE EMPLOYER'S UNDERTAKINGS**

**F.3.1.1 Respond to requests from the tenderer:** Replace the words “five working days” with “three working days”.

**F.3.2 Issue addenda:** Add the following paragraph: “Addenda will be published, in electronic format, on the National Treasury’s eTenders website. In the event that the Clarification Meeting is compulsory, Addenda will only be issued to those tendering entities appearing on the Clarification Meeting Register.”

**F.3.4 Opening of Tender Submissions:** Tenders will be opened immediately after the closing time for tenders. The tender opening will be streamed live on the following platforms:

- Facebook - <https://www.facebook.com/eThekwiniM>
- Twitter - <https://twitter.com/eThekwiniM>
- LinkedIn - <https://www.linkedin.com/company/ethekwinim>
- YouTube - <https://www.youtube.com/user/eThekwiniMuni>

**F.3.11 Evaluation of Tender Offers:** The procedure for evaluation of responsive Tender Offers will be in accordance with the Employer’s current SCM Policy, the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (January 2017).

The procedure for the evaluation of responsive tenders is **Method 2** (Price and Preference with functionality).

The **80/20** preference points system will be used where the financial value (incl. VAT) of one or more responsive tender offers have a value that equals or is less than R 50,000,000. The Formula used to calculate the **Price Points**, and the **Preference Points** that will be allocated, will be according to the specified PPPFA Regulations.

The **90/10** preference points system will be used where the financial value (incl. VAT) of all responsive tenders received have a value in excess of R 50,000,000. The Formula used to calculate the **Price Points**, and the **Preference Points** that will be allocated, will be according to the specified PPPFA Regulations.

Only locally produced goods, services, or works, or locally manufactured goods, with a stipulated minimum threshold for Local Production and Content will be considered.

F.3.11.9 The value of W<sub>2</sub> is 100. The Functionality criteria (and sub-criteria if applicable) and maximum score in respect of each of the criteria are as follows:

| Functionality Criteria / Sub Criteria                           |                   | Maximum Points Score |
|---|-------------------|----------------------|
| Tenderer’s Experience   |                   | 30                   |
| Project Organogram and Experience of Key Staff                  | Contracts Manager | 10                   |
|   | Site agent        | 10                   |
|   | Foremen           | 5                    |
| Preliminary Programme   |                   | 10                   |
| Construction Methodology  |                   | 35                   |
| <b>Maximum possible score for Functionality (M<sub>s</sub>)</b> |                   | <b>100</b>           |

The minimum number of evaluation points for Functionality is **60**. Only those tenderers who achieve the minimum number of Functionality evaluation points (or greater) will be eligible to have their tenders further evaluated.

Functionality shall be scored by not less than three evaluators and the scores of each of the

evaluators will be averaged, weighted and then totalled to obtain the final score for Functionality. Each evaluation criteria will be assessed in terms of six indicators and scores allocated according to the following table:

| Level 0 | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|---------|---------|---------|---------|---------|---------|
| 0       | 20      | 40      | 60      | 80      | 100     |

Evaluation criteria will be adjudicated according to submissions made in accordance with the following schedules, which are found in Part T2.2: Returnable Schedules:

| Functionality criteria / Subcriteria           | Returnable Schedules  |
|--|---|
| Tenderer's Experience                          | <ul style="list-style-type: none"> <li>• Experience of Tenderer</li> </ul>  |
| Project Organogram and Experience of Key Staff | <ul style="list-style-type: none"> <li>• Proposed Organisation and Staffing</li> <li>• Key Personnel</li> <li>• Experience of Key Personnel</li> </ul>                |
| Preliminary Programme                          | <ul style="list-style-type: none"> <li>• Preliminary Programme</li> </ul>   |
| Construction Methodology                       | <ul style="list-style-type: none"> <li>• Construction Approach, Methodology,</li> <li>• Schedule of Proposed Subcontractors</li> <li>• Plant and Equipment</li> </ul> |

Unless otherwise stated, evaluation criteria will be adjudicated with respect to the contract specific Scope of Work, as specified in Part C.3. The prompts for judgement for each of the evaluation criteria are listed below:

The prompts for judgement for each of the evaluation criteria are listed below:

| Criterion: Tenderer's Experience  |   |
|---|---|
| Note 1: "successfully completed" implies a project has been completed on time and to specification.<br>Note 2: "similar nature" implies a project that entails the construction of sewer reticulation and pipe jacking within a developed area. |   |
| Level 0   | No information provided; OR submission of no substance / irrelevant information provided            |
| Level 1   | To have successfully completed <u>1 project</u> of a similar nature within the past 10 years.       |
| Level 2   | To have successfully completed <u>2 projects</u> of a similar nature within the past 10 years.      |
| Level 3   | To have successfully completed <u>3 projects</u> of a similar nature within the past 10 years.      |
| Level 4   | To have successfully completed <u>4 to 5 projects</u> of a similar nature within the past 10 years. |
| Level 5   | To have successfully completed <u>5+ projects</u> of a similar nature within the past 10 years.     |

| <b>Criterion: Project Organogram and Experience of Key Staff</b>   |   |   |  |
|--|---|---|--|
| Note 1: "experience" implies experience on projects of a similar nature with respect to the Scope<br>Note 2: "accredited degree / diploma" implies a minimum 3 yr qualification within the built environment, from a registered University or Institute of Technology. |   |   |  |
|  | <b>CONTRACTS MANAGER</b>  | <b>SITE AGENT</b>   | <b>FOREMAN</b>   |
| Level 0  | No information provided OR submission of no substance / irrelevant information provided / Relevant accredited diploma / degree and less than 1 year's experience. | No information provided OR submission of no substance / irrelevant information provided / Relevant accredited diploma / degree and less than 1 year's experience. | No information provided OR submission of no substance / irrelevant information OR Less than 2 year's experience. |
| Level 1  | Relevant accredited diploma / degree and minimum 1 year's experience.   | Relevant accredited diploma / degree and minimum 1 year's experience.   | Minimum 2 year's experience.   |
| Level 2  | Relevant accredited diploma / degree and minimum 2 year's experience.   | Relevant accredited diploma / degree and minimum 2 year's experience.   | Minimum 3 year's experience.   |
| Level 3  | Relevant accredited diploma / degree and minimum 4 year's experience.   | Relevant accredited diploma / degree and minimum 4 year's experience.   | Minimum 5 year's experience.   |
| Level 4  | Relevant accredited diploma / degree and minimum 7 year's experience.   | Relevant accredited diploma / degree and minimum 7 year's experience.   | Minimum 8 year's experience.   |
| Level 5  | Relevant accredited diploma / degree and minimum 9 year's experience.   | Relevant accredited diploma / degree and minimum 9 year's experience.   | Minimum 10 year's experience.  |

| <b>Criterion: Preliminary Programme</b> |  |
|---|--|
| Level 0                                 | No information provided OR submission of no substance / irrelevant information provided  |
| Level 1                                 | Programme <u>does not cover</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and not in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).  |
| Level 2                                 | Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).   |
| Level 3                                 | Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).<br><b>Plus:</b> Shows critical path with logical linking of tasks/activities  |
| Level 4                                 | Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).<br><b>Plus:</b> <ul style="list-style-type: none"> <li>• Shows critical path with logical linking of tasks/activities, and</li> <li>• Detailed activity and resources breakdown.</li> <li>• Cashflow included</li> </ul>  |
| Level 5                                 | Programme <u>covering</u> all the applicable individual activities which are in an acceptable sequence, with appropriate durations, and is in accordance with generally accepted construction practice, and is in line with Clause 1.1.1.14 of the Conditions of Contract (time for achieving Practical Completion).<br><b>Plus:</b> <ul style="list-style-type: none"> <li>• Shows critical path with logical linking of tasks/activities, and</li> <li>• Detailed activity and resources breakdown.</li> <li>• Cashflow included</li> <li>• Detailed Plant and equipment resource breakdown</li> </ul> |

| <b>Criterion: Construction Methodology</b> |  |
|--|--|
| Level 0                                    | No information provided OR submission of no substance / irrelevant information provided  |
| Level 1                                    | Brief overview of a <u>generic</u> methodology which encompasses all programmed activities in appropriate order.   |
| Level 2                                    | Brief overview of a <u>site specific</u> methodology which encompasses all programmed activities in appropriate and logical order.   |
| Level 3                                    | Brief overview of a <u>site specific</u> methodology which encompasses all programmed activities in appropriate order; <b>Plus:</b> <ul style="list-style-type: none"> <li>• Including staff, plant and equipment resources</li> <li>• Including subcontractors if applicable</li> <li>• Including methodology on the pipe jacking</li> </ul>  |
| Level 4                                    | Brief overview of <u>site specific</u> methodology which encompasses all programmed activities in appropriate order; <b>Plus:</b> <ul style="list-style-type: none"> <li>• Including staff, plant and equipment resources,</li> <li>• Including subcontractors if applicable,</li> <li>• Including methodology on the pipe jacking</li> <li>• A brief description of preparatory work, construction processes including finishing works for each activity.</li> <li>• Only a brief overview of the tenderers perception on the safety requirements for this contract.</li> </ul>   |
| <b>Level 5</b>                             | Brief overview of <u>site specific</u> methodology which encompasses all programmed activities in appropriate order; <b>Plus:</b> <ul style="list-style-type: none"> <li>• Including staff, plant and equipment resources,</li> <li>• Including subcontractors if applicable,</li> <li>• Including methodology on the pipe jacking</li> <li>• A brief description of preparatory work, construction processes including finishing works for each activity.</li> <li>• Only a brief overview of the tenderers perception on the safety requirements for this contract.</li> <li>• Demonstrates how the important issues are approached in an innovative and efficient way, indicating that the tenderer has excellent knowledge of working in the projects environment and producing the required final product.</li> </ul> |

**F.3.13 Acceptance of tender offer:** In addition to the requirements of Clause F.3.13 of the Standard Conditions of Tender, tender offers will only be accepted if:

- (a) The tenderer submits a valid Tax Clearance Certificate OR Tax Compliance Status PIN, issued by the TCS System of the South African Revenue Services, or has made arrangements to meet outstanding tax obligations;
- (b) The tenderer is registered, and “Active”, with the Construction Industry Development Board, at time of tender closing, in an appropriate contractor grading designation;
- (c) The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- (d) The tenderer has not:
  - Abused the Employer’s Supply Chain Management System; or
  - Failed to perform on any previous contract and has been given a written notice to this effect;
- (e) The tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer’s ability to perform the contract in the best interests of the employer or potentially compromise the tender process;
- (f) The tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;
- (g) The employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.
- (h) If this tender is subject to “Local Content and Production”, the tenderer must complete and sign MBD 6.2 and attach Annexure C (of SATS 1286:2011).
- (i) The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

**F.3.15 Complete adjudicator’s contract:** Refer to the General Conditions of Contract and the Contract Data.

**F.3.17 Copies of contract:** The number of paper copies of the signed contract to be provided by the

Employer is ONE (1). Bidders are also required to submit a SOFT COPY of their completed bid saved onto a memory stick.

**The additional conditions of tender are:**

**ACT.1 Appeals**

In terms of Regulation 49 of the Municipal Supply Chain Management Regulations persons aggrieved by decisions or actions taken by the Municipality, may lodge an appeal within 14 days of the decision or action, in writing to the Municipality. All appeals (clearly setting out the reasons for the appeal) and queries with regard to the decision of award are to be directed to:

The City Manager  
Attention Ms S. Pillay eMail: Simone.Pillay@durban.gov.za  
P O Box 1394  
DURBAN, 4000

**ACT.2 Prohibition on awards to persons in the service of the state**

Clause 44 of the Supply Chain Management Regulations states that the Municipality or Municipal Entity may not make any award to a person:

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

Should a contract be awarded, and it is subsequently established that Clause 44 has been breached, the Employer shall have the right to terminate the contract with immediate effect.

**ACT.3 Code of Conduct and Local Labour**

The Tenderers shall make themselves familiar with the requirements of the following policies that are available on web address: <ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

- Code of Conduct;
- The Use of CLOs and Local Labour.

**PART T2: RETURNABLE DOCUMENTS**  
**T2.1: LIST OF RETURNABLE DOCUMENTS**

**T2.1.1 General**

The Tender Document must be submitted as a whole. All forms must be properly completed as required, and the document shall not be taken apart or altered in any way whatsoever.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of his ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is not responsive.

**T2.1.2 Returnable Schedules, Forms and Certificates**

**Company Specific**

|   |    |
|---|----|
| Certificate of Attendance at Clarification Meeting    | 14 |
| Certificate of Authority                              | 15 |
| Declaration of Municipal Fees                         | 16 |
| Compulsory Enterprise Questionnaire                   | 17 |
| Tax Compliance Status PIN / Tax Clearance Certificate | 19 |
| B-BBEE Status Level of Contribution Certificate       | 20 |
| Verification of CIDB Registration and Status          | 21 |
| CSD Registration Report                               | 22 |

**Consolidated MBD Documents**

|  |    |
|--|----|
| MBD2: Tax Clearance Certificate Requirements                                     | 24 |
| MBD4: Declaration of Interest  |    |
| MBD5: Declaration For Procurement Above R10 Million (if applicable)              |    |
| MBD6.1: Preference Points Claim Form ITO the Preferential Regulations            |    |
| MBD6.2: Declaration Certificate For Local Production And Content (if applicable) |    |
| MBD8: Declaration of Bidder's Past SCM Practices                                 |    |
| MBD9: Certificate of Independent Bid Determination                               |    |

**Technical and Evaluation**

|   |    |
|---|----|
| Experience of Tenderer                                  | 32 |
| Proposed Organisation and Staffing                      | 33 |
| Experience of Key Personnel                             | 34 |
| Preliminary Programme                                   | 35 |
| Construction Approach, Methodology, and Quality Control | 36 |
| Schedule of Proposed Subcontractors                     | 37 |
| Plant and Equipment                                     | 38 |
| Contractor's Health and Safety Plan                     | 39 |
| Contractor's Health and Safety Declaration              | 40 |

**Contractual**

|   |    |
|---|----|
| Joint Venture Agreements (if applicable)    | 42 |
| Record of Addenda to Tender Documents       | 43 |
| Amendments, Qualifications and Alternatives | 44 |
| Form of Offer                               | 45 |
| Bill of Quantities                          | 59 |

### **T2.1.3 Preferential Procurement Schedules and Affidavits**

In the event of the Tenderer not being registered with the eThekweni Municipality, the tenderer must register on the internet at [www.durban.gov.za](http://www.durban.gov.za) by following these links:

- eThekweni Municipality
  - City Government
    - Administration
      - Administrative Clusters
      - Finance
        - Supply Chain Management
        - Accredited Supplier and Contractor's Database.

#### **NOTES**

- (a) The information for registration as in the possession of the eThekweni Municipality will apply.
- (b) It is the Tenderer's responsibility to ensure that the details as submitted to the Municipality are correct.
- (c) Tenderers are to register prior to the submission of tenders.

### **T2.2: RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES**

The returnable schedules, forms, and certificates as listed in T2.1.2 can be found on the pages 14 to 40.

**CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING / SITE INSPECTION**

This is to certify that:

(tenderer name) .....

of (address) .....

.....

was represented by the person(s) named below at the Clarification Meeting held for all tenderers, the details of which are stated in the Tender Data (F.2.7).

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

**Particulars of person(s) attending the meeting:**

Name: .....

Name: .....

Signature: .....

Signature:.....

Capacity: .....

Capacity:.....

**Attendance of the above person(s) at the meeting is confirmed by the Employer's Agent's Representative, namely:**

Name: .....

Signature: .....

Date: .....

**CERTIFICATE OF AUTHORITY**

Indicate the status of the tenderer by ticking the appropriate box hereunder.

|  |                          |                    |                      |                        |
|--|--------------------------|--------------------|----------------------|------------------------|
| <b>COMPANY</b>                           | <b>CLOSE CORPORATION</b> | <b>PARTNERSHIP</b> | <b>JOINT VENTURE</b> | <b>SOLE PROPRIETOR</b> |
| Refer to Notes at the bottom of the page |                          |                    |                      |                        |

I / We, the undersigned, being the Chairperson (Company), Member(s) (Close Corporation), Partners (Partnership), Sole Owner (Sole Proprietor), Lead Partner (JV), in the company / business trading as:

.....

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

acting in the capacity of .....

to sign all documents in connection with the tender for **Contract No. WS7190** and any contract resulting from it on our behalf.

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

**Notes**

The following documents must be attached to the back inside cover to this procurement document:

- If a Company : a "Resolution of the Board" in this regard.
- If a Joint Venture : a "Power of Attorney" signed by the legally authorised signatories of all the partners to the Joint venture.

**DECLARATION OF MUNICIPAL FEES**

I, the undersigned, do hereby declare that the Municipal fees of

.....  
(full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture)  
(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

The following account details relate to property of the said TENDERER:

| <u>Account</u>           | <u>Account Number:</u> to be completed by tenderer.   |
|--------------------------|---|
| Consolidated Account No. | <input type="text"/> |
| Electricity              | <input type="text"/> |
| Water                    | <input type="text"/> |
| Rates                    | <input type="text"/> |
| JSB Levies               | <input type="text"/> |
| <u>Other</u>             | <input type="text"/> |
| <u>Other</u>             | <input type="text"/> |

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears. ATTACHED, to the back inside cover of this document, please find copies of the above account's and or agreements signed with the municipality.

- Where the TENDERER'S place of business or business interests are outside the jurisdiction of eThekweni municipality, a copy of the accounts/agreements from the relevant municipality must be attached (to the back inside cover of this document).
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or official letter to that effect is to be attached (to the back inside cover of this document).

NAME : ..... (Block Capitals)

SIGNATURE : ..... DATE: .....

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

**COMPULSORY ENTERPRISE QUESTIONNAIRE**

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

- 1) **Name of enterprise:** .....
- 2) **VAT registration number, if any:** .....
- 3) **CIDB registration number, if any:** .....
- 4) **Particulars of sole proprietors and partners in partnerships**

| Full Name | Identity number* | Personal income tax number * |
|-----------|------------------|------------------------------|
|           |                  |                              |
|           |                  |                              |
|           |                  |                              |

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

5) **Particulars of companies and close corporations**

Company registration number, if applicable: .....

Close corporation number, if applicable: .....

Tax Reference number, if any: .....

6) **Record in the service of the state**

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

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

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

Insert separate page if necessary

**7) Record of spouses, children and parents in the service of the state**

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

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

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

Insert separate page if necessary

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

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

Signed ..... Date .....

Name ..... Position .....

Enterprise Name .....

**TAX COMPLIANCE STATUS PIN / TAX CLEARANCE CERTIFICATE**

Reference is made to F.2.23 of the Conditions of Tender.

SARS has introduced a new Tax Compliance Status System. Tenderers can submit a Tax Compliance Status PIN (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer’s real-time compliance status.

Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

Tenderers are to attach to this page a printout of their Tax Compliance Status PIN (TCS PIN) OR an original Tax Clearance Certificate.

NAME : ..... (Block Capitals)

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

**B-BBEE STATUS LEVEL OF CONTRIBUTION CERTIFICATE**

Reference is made to F.2.23 of the Conditions of Tender.

The Amended Construction Sector Code (Government Gazette No.41287) is applicable to the B-BBEE compliance measurement of all entities that fall within the Construction Sector.

The requirements for measurement and verification of entities are contained in the “Amended Code Series CSC000: Framework for Measuring Broad Based Black Economic Empowerment in the Construction Sector”, as published in Notice 931 of 2017, Government Gazette No.41287 of 01/12/2017.

The requirements are summarised in the following table:

| Enterprise Type  | Total Annual Revenue (R million) | Ownership and Annual Turnover  |
|--|----------------------------------|--|
| EME: Built Environment Professional  | < R1.8m                          | May present an <b>affidavit</b><br>OR<br>a <b>certificate</b> issued by the CIPC<br>OR<br>authorised <b>B-BBEE verification certificate</b> (as below) |
| EME: Contractor  | < R3.0m                          |  |
| Reference should be made to Cl.3.6.2.4.1 of the Amended Construction Sector Code regarding the above exceptions. |                                  |  |
| EME: Built Environment Professional  | < R6m                            | Must present an authorised <b>B-BBEE verification certificate</b> by a SANAS accredited Verification Agency  |
| EME: Contractor  | < R10m                           |  |
| QSE: Built Environment Professional  | ≥ R6.0m and < R25m               |  |
| QSE: Contractor  | ≥ R10.0m and < R50m              |  |
| Large Enterprise   | >R50m                            |  |

The requirements for measurement of Joint Ventures is described in Cl.2.8 of the Amended Construction Sector Code. The compilation of a consolidated verification certificate is required.

Tenderers are to attach to this page an affidavit, or a B-BEEE certificate issued by an authorised SANAS accredited Verification Agency.

NAME : ..... (Block Capitals)

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

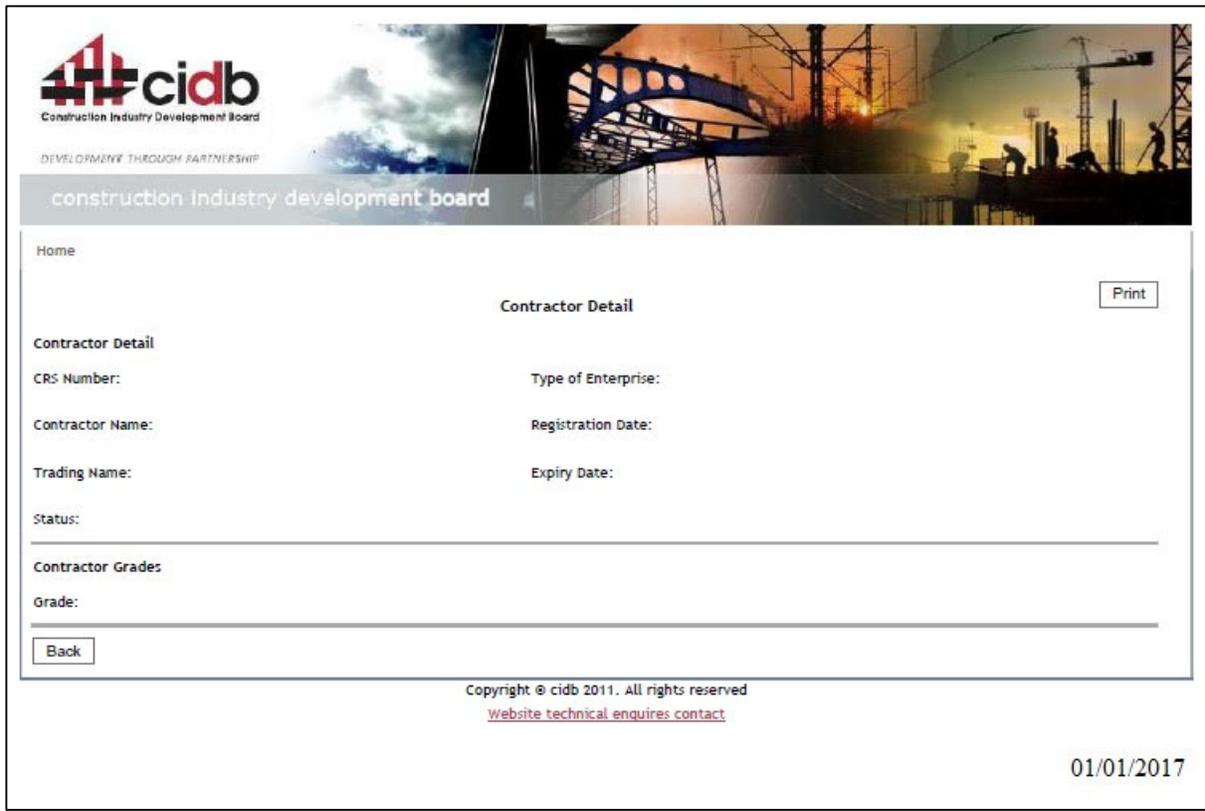
**VERIFICATION OF CIDB REGISTRATION AND STATUS**

Reference is made to F.2.23 of the Conditions of Tender.

Clause F.2.1.1 of the Conditions of Tender – “Eligibility”, requires a tenderer to be registered, as “Active”, with the CIDB (at time of tender closing), in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a CE class of construction work.

Tenderers are to attach to this page a printout of their registration with the CIDB, as obtained from the CIDB website <https://registers.cidb.org.za/PublicContractors/ContractorSearch>. The date of obtaining the printout is to be indicated on the printout.

The following is an example of a printout obtained from the above website.



NAME : ..... (Block Capitals)

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

**CSD REGISTRATION REPORT**

Reference is made to F.2.23 of the Conditions of Tender.

Clause F.2.1 of the Conditions of Tender – “Eligibility”, requires a tenderer to be registered at the time of tender closing on the National Treasury Central Supplier Database (CSD) as a service provider.

Tenderers are to attach to this page a printout of their CSD Registration Report, as obtained from the National Treasury’s CSD website <https://secure.csd.gov.za/Account/Login>. The date of obtaining the printout is to be indicated on the printout.

The following is an example of the beginning of the printout obtained from the above website.

**CENTRAL SUPPLIER DATABASE FOR GOVERNMENT**

Report Date: \_\_\_\_\_

Report Ran By: \_\_\_\_\_

**CSD REGISTRATION REPORT**

**SUPPLIER IDENTIFICATION**

|  |       |                                    |       |
|--|-------|------------------------------------|-------|
| Supplier number                              | _____ | Have Bank Account                  | _____ |
| Is supplier active?                          | _____ | Total annual turnover              | _____ |
| Supplier type                                | _____ | Financial year start date          | _____ |
| Supplier sub-type                            | _____ | Registration date                  | _____ |
| Legal name                                   | _____ | Created by                         | _____ |
| Trading name                                 | _____ | Created date                       | _____ |
| Identification type                          | _____ | Edit by                            | _____ |
| Government breakdown                         | _____ | Edit date                          | _____ |
| Business status                              | _____ | Restricted Supplier                | _____ |
| Country of origin                            | _____ | Restriction Last Verification Date | _____ |
| South African company/CC registration number | _____ |                                    |       |

NAME : ..... (Block Capitals)

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

**AUDITED FINANCIAL STATEMENTS**

**CONSOLIDATED MUNICIPAL BIDDING DOCUMENTS**

**The following SECTIONS are required to be completed as part of this procurement document**

| <u>Section</u> | <u>Description</u>   | <u>Required?</u> |
|----------------|--|------------------|
| <b>A</b>       | General Enterprise Information .....   | <b>Yes</b>       |
| <b>B</b>       | MBD2: Tax Clearance Certificate Requirements .....   | <b>Yes</b>       |
| <b>C</b>       | MBD4: Declaration of Interest .....  | <b>Yes</b>       |
| <b>D</b>       | MBD5: Declaration for Procurement Above R10 Million .....                                    | <b>Yes</b>       |
| <b>E</b>       | MBD6.1: Preference Points Claim Form ITO the Preferential Regulations .....                  | <b>Yes</b>       |
| <b>F</b>       | MBD6.2: Declaration Certificate for Local Production and Content for Designated Sectors..... | <b>Yes</b>       |
| <b>G</b>       | MBD8: Declaration of Bidder’s Past SCM Practices .....                                       | <b>Yes</b>       |
| <b>H</b>       | MBD9: Certificate of Independent Bid Determination .....                                     | <b>Yes</b>       |
| <b>I</b>       | Confirmations, Authorities, Certifications, Acknowledgements and Signatures .....            | <b>Yes</b>       |

**NOTES**

- MBD4. MSCM Regulations: “**in the service of the state**” means to be:
- (a) a member of –
    - (i) any municipal council;
    - (ii) any provincial legislature; or
    - (iii) the national Assembly or the national Council of provinces;
  - (b) a member of the board of directors of any municipal enterprise;
  - (c) an official of any municipality or municipal enterprise;
  - (d) an employee of any national or provincial department, national or provincial public enterprise or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
  - (e) a member of the accounting authority of any national or provincial public enterprise; or
  - (f) an employee of Parliament or a provincial legislature.
- “**Shareholder**” means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.
- MBD9. 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.

| Ref | Description | Complete or<br>Circle Applicable |
|-----|-------------|----------------------------------|
|-----|-------------|----------------------------------|

**SECTION A: GENERAL ENTERPRISE INFORMATION**

|     |   |  |
|-----|---|--|
| 1.0 | Full Name of bidder or his or her representative                |  |
| 1.1 | ID Number of bidder or his or her representative                |  |
| 1.2 | Position occupied in the enterprise                             |  |
| 2.0 | Name of enterprise:   |  |
| 2.1 | Tax Reference number, if any:                                   |  |
| 2.2 | VAT registration number, if any:                                |  |
| 2.3 | CIDB registration number, if any:                               |  |
| 2.4 | Company registration number, if applicable:                     |  |
| 2.5 | Close corporation number, if applicable:                        |  |
| 2.6 | Supplier reference number (PR), if any:                         |  |
| 2.7 | South African Revenue Service Tax Compliance Status PIN:        |  |
| 2.8 | National Treasury Central Supplier Database registration number |  |

3.0 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted

| Full Name | Identity No. | State Employee No. | Personal income tax No. * |
|-----------|--------------|--------------------|---------------------------|
|           |              |                    |                           |
|           |              |                    |                           |
|           |              |                    |                           |
|           |              |                    |                           |
|           |              |                    |                           |
|           |              |                    |                           |
|           |              |                    |                           |

Use additional pages if necessary

| Ref | Description | Complete or Circle Applicable |
|-----|-------------|-------------------------------|
|-----|-------------|-------------------------------|

**SECTION B: MBD 2: TAX CLEARANCE CERTIFICATE REQUIREMENTS**  
 It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder’s tax obligations.

- 1.0 In order to meet this requirement bidders are required to complete the TCC 001: “Application for a Tax Clearance Certificate” form and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- 2.0 SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- 3.0 The original Tax Clearance Certificate must be submitted together with the bid (attached to the inside back cover of this procurement document). Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- 4.0 In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.
- 5.0 Copies of the TCC 001: “Application for a Tax Clearance Certificate” form are available from any SARS branch office nationally or on the website [www.sars.gov.za](http://www.sars.gov.za).
- 6.0 Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website [www.sars.gov.za](http://www.sars.gov.za).
- 7.0 Notwithstanding Clauses 1.0 to 6.0 above: Since 18 April 2016, SARS has introduced a new Tax Compliance Status System (TCS). As part of this enhanced system, tenderers can now submit a Tax Compliance Status PIN instead of an original Tax Clearance Certificate (TCC). This TCS PIN can be used by third parties to certify the taxpayer’s real-time compliance status. This number, if available, is to be entered in Item 2.7 of Section A of these consolidated Municipal Bidding Documents.  
 For further particulars please contact your nearest SARS branch, or call the SARS Contact Centre on 0800 00 7277, or log onto SARS eFiling.

**SECTION C: MBD 4: DECLARATION OF INTEREST**  
**No bid will be accepted from persons “in the service of the state”.** Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

|  |     |    |
|--|-----|----|
| 1.0 Are you presently in the service of the state?<br><br>If yes, furnish particulars: .....   | YES | NO |
| 2.0 Have you been in the service of the state for the past twelve months?<br><br>If yes, furnish particulars: .....  | YES | NO |
| 3.0 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?<br><br>If yes, furnish particulars: .....   | YES | NO |
| 4.0 Are you, aware of any relationship (family, friend, other) between any other bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid?<br><br>If yes, furnish particulars: .....                     | YES | NO |
| 5.0 Are any of the company’s directors, trustees, managers, principle shareholders or stakeholders in service of the state?<br><br>If yes, furnish particulars: .....  | YES | NO |
| 6.0 Are any spouse, child or parent of the company’s directors, trustees, managers, principle shareholders or stakeholders in service of the state?<br><br>If yes, furnish particulars: .....  | YES | NO |
| 7.0 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 ?<br><br>If yes, furnish particulars: ..... | YES | NO |
| 8.0 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers are indicated in <b>SECTION A of these Consolidated Municipal Bidding documents.</b>        |     |    |

| Ref  | Description   | Complete or Circle Applicable |    |
|--|---|-------------------------------|----|
| <b>SECTION D: MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)</b>                                 |   |                               |    |
| For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire. |   |                               |    |
| 1.0  | Are you by law required to prepare annual financial statements for auditing?<br>If YES, you will be required to submit audited annual financial statements (on request during the tender evaluation period) for the past three years or since the date of establishment if established during the past three years.   | YES                           | NO |
| 2.0  | Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?<br>If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.<br>If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document). | YES                           | NO |
| 3.0  | 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?<br>If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).  | YES                           | NO |
| 4.0  | 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?<br>If YES, provide particulars on a letterhead. (Attach this letter to the back inside cover of this procurement document).   | YES                           | NO |

| <b>SECTION E: MBD 6.1: PREFERENCE POINTS CLAIM ITO THE PREFERENTIAL REGULATIONS</b>   |  |     |    |
|---|--|-----|----|
| Preference points for this tender shall be awarded as per the Tender Data and the Preferential Procurement Regulations (2017).<br>Failure on the part of a tenderer to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Sworn Affidavit for an EME, or sworn affidavit for a QSE (in line with the revised BBEE codes of Good Practice), together with the bid will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.<br>The Employer reserves the right to require of a tenderer, 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 Employer. |  |     |    |
| 1.0   | B-BBEE Status Level of Contribution claimed:               |     |    |
|   | Will any portion of the contract be sub-contracted?        | YES | NO |
|   | If YES, indicate:  |     |    |
|   | (i) what percentage of the contract will be subcontracted? |     |    |
|   | (ii) the name of the sub-contractor?                       |     |    |
|   | Name: .....  |     |    |
|   | (iii) the B-BBEE status level of the sub-contractor?       |     |    |
| 2.0   | (iv) whether the sub-contractor is an EME?                 | YES | NO |

The undersigned, certify that the B-BBEE status level of contribution indicated in paragraph 1.0 above qualifies the company / firm for preference points and acknowledges that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply.

| <b>SECTION F: MBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS</b>   |  |  |  |
|--|--|--|--|
| This Municipal Bidding Document (MBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).<br>Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017 and the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)]. |  |  |  |

- 1.0 General Conditions
- 1.1 Preferential Procurement Regulations, 2017 (Regulation 8) makes provision for the promotion of local production and content.
- 1.2 Regulation 8.(1) prescribes that in the case of designated sectors, where in the award of bids local production and content is of critical importance, such bids must be advertised with the specific bidding condition that only locally produced goods, services or works or locally manufactured goods, with a stipulated minimum threshold for local production and content will be considered.
- 1.3 Where necessary, for bids referred to in paragraph 1.2 above, a two-stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4 A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.

| Ref  | Description  | Complete or Circle Applicable  |                                     |       |         |       |         |       |         |  |
|--|--|--|-------------------------------------|-------|---------|-------|---------|-------|---------|--|
| 1.5  | <p>The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:</p> $LC = [1 - x / y] * 100$ <p>Where: x is the imported content in Rand<br/>y is the bid price in Rand excluding value added tax (VAT).</p> <p>Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by the South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as required in paragraph 4.1 below.</p> <p>The SABS approved technical specification number SATS 1286:2011 is accessible on <a href="http://www.thedti.gov.za/industrial%20development/ip.jsp">http://www.thedti.gov.za/industrial development/ip.jsp</a> at no cost.</p>  |  |                                     |       |         |       |         |       |         |  |
| 1.6  | <p>A bid may be disqualified if –</p> <p>(a) this Declaration Certificate and the Annex C (Local Content Declaration: Summary Schedule) are not submitted as part of the bid documentation; and</p> <p>(b) the bidder fails to declare that the Local Content Declaration Templates (Annex C, D and E) have been audited and certified as correct.</p>   |  |                                     |       |         |       |         |       |         |  |
| 2.0  | Definitions  |  |                                     |       |         |       |         |       |         |  |
| 2.1  | “bid” includes written price quotations, advertised competitive bids or proposals;   |  |                                     |       |         |       |         |       |         |  |
| 2.2  | “bid price” price offered by the bidder, excluding value added tax (VAT);  |  |                                     |       |         |       |         |       |         |  |
| 2.3  | “contract” means the agreement that results from the acceptance of a bid by an organ of state;   |  |                                     |       |         |       |         |       |         |  |
| 2.4  | “designated sector” means a sector, sub-sector or industry that has been designated by the Department of Trade and Industry in line with national development and industrial policies for local production, where only locally produced services, works or goods or locally manufactured goods meet the stipulated minimum threshold for local production and content;   |  |                                     |       |         |       |         |       |         |  |
| 2.5  | “duly sign” means a Declaration Certificate for Local Content that has been signed by the Chief Financial Officer or other legally responsible person nominated in writing by the Chief Executive, or senior member / person with management responsibility (close corporation, partnership or individual).  |  |                                     |       |         |       |         |       |         |  |
| 2.6  | “imported content” means that portion of the bid price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or its subcontractors) and which costs are inclusive of the costs abroad (this includes labour and intellectual property costs), plus freight and other direct importation costs, such as landing costs, dock duties, import duty, sales duty or other similar tax or duty at the South African port of entry;   |  |                                     |       |         |       |         |       |         |  |
| 2.7  | “local content” means that portion of the bid price which is not included in the imported content, provided that local manufacture does take place;  |  |                                     |       |         |       |         |       |         |  |
| 2.8  | “stipulated minimum threshold” means that portion of local production and content as determined by the Department of Trade and Industry; and   |  |                                     |       |         |       |         |       |         |  |
| 2.9  | “sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract.   |  |                                     |       |         |       |         |       |         |  |
| 3.0  | <p>The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><u>Description of services, works or goods</u></th> <th style="text-align: right;"><u>Stipulated minimum threshold</u></th> </tr> </thead> <tbody> <tr> <td>.....</td> <td style="text-align: right;">..... %</td> </tr> <tr> <td>.....</td> <td style="text-align: right;">..... %</td> </tr> <tr> <td>.....</td> <td style="text-align: right;">..... %</td> </tr> </tbody> </table>   | <u>Description of services, works or goods</u>   | <u>Stipulated minimum threshold</u> | ..... | ..... % | ..... | ..... % | ..... | ..... % |  |
| <u>Description of services, works or goods</u> | <u>Stipulated minimum threshold</u>  |  |                                     |       |         |       |         |       |         |  |
| .....  | ..... %  |  |                                     |       |         |       |         |       |         |  |
| .....  | ..... %  |  |                                     |       |         |       |         |       |         |  |
| .....  | ..... %  |  |                                     |       |         |       |         |       |         |  |
| 4.0  | Does any portion of the services, works or goods offered have any imported content?  | <table border="1" style="display: inline-table;"> <tr> <td style="width: 50px; text-align: center;">YES</td> <td style="width: 50px; text-align: center;">NO</td> </tr> </table> | YES                                 | NO    |         |       |         |       |         |  |
| YES  | NO   |  |                                     |       |         |       |         |       |         |  |
| 4.1  | <p>If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by the SARB for the specific currency at 12:00 on the date of advertisement of the bid.</p> <p>The relevant rates of exchange information is accessible on <a href="http://www.reservebank.co.za">www.reservebank.co.za</a>.</p> <p>Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):</p> <p>US Dollar: <input style="width: 50px;" type="text"/> Pound Sterling: <input style="width: 50px;" type="text"/> Euro: <input style="width: 50px;" type="text"/> Yen: <input style="width: 50px;" type="text"/> Other: <input style="width: 50px;" type="text"/></p> <p>NB: Bidders must submit proof of the SARB rate (s) of exchange used.</p> |  |                                     |       |         |       |         |       |         |  |
| 5.0  | Were the Local Content Declaration Templates (Annex C, D and E) audited and certified as correct?  | <table border="1" style="display: inline-table;"> <tr> <td style="width: 50px; text-align: center;">YES</td> <td style="width: 50px; text-align: center;">NO</td> </tr> </table> | YES                                 | NO    |         |       |         |       |         |  |
| YES  | NO   |  |                                     |       |         |       |         |       |         |  |
| 5.1  | <p>If yes, provide the following particulars:</p> <p>(a) Full name of auditor: .....</p> <p>(b) Practice number: ..... (c) Telephone number: .....<br/>Cell number: .....</p> <p>(d) Email address: .....</p> <p>(Documentary proof regarding the declaration will, when required, be submitted to the satisfaction of the Accounting Officer / Accounting Authority)</p>  |  |                                     |       |         |       |         |       |         |  |
| 6.0  | Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the Accounting Officer / Accounting Authority provide directives in this regard.  |  |                                     |       |         |       |         |       |         |  |

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

LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (Close Corporation, Partnership or Individual)

.....  
IN RESPECT OF BID No:

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

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

I, the undersigned in Section H of these Consolidated MBD returnable questionnaires ( comprising 8 pages), do hereby declare the following:

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

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

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

- (d) I accept that the Procurement Authority / Municipality /Municipal Entity has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Municipal / Municipal Entity imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

**SECTION G: MBD8: DECLARATION OF BIDDER’S PAST SUPPLY CHAIN MANAGEMENT PRACTICES**

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

The bid of any bidder may be rejected if that bidder, or any of its directors have:

- a) abused the municipal entity’s supply chain management system or committed any improper conduct in relation to such system;
  - b) been convicted for fraud or corruption during the past five years;
  - c) wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
  - d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).
- In order to give effect to the above, the following questions must be answered.

|     |   |     |    |
|-----|---|-----|----|
| 1.0 | Is the bidder or any of its directors listed on the National Treasury’s Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?<br>Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer / Authority of the institution that imposed the restriction after the audi alteram partem rule was applied. The Database of Restricted Suppliers now resides on the National Treasury’s website ( <a href="http://www.treasury.gov.za">www.treasury.gov.za</a> ) and can be accessed by clicking on its link at the bottom of the home page.<br><br>If yes, furnish particulars: ..... | YES | NO |
| 2.0 | Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?<br>The Register for Tender Defaulters can be accessed on the National Treasury’s website ( <a href="http://www.treasury.gov.za">www.treasury.gov.za</a> ) by clicking on its link at the bottom of the home page.<br><br>If yes, furnish particulars: .....  | YES | NO |
| 3.0 | 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?<br><br>If yes, furnish particulars: .....  | YES | NO |

|  |     |    |
|--|-----|----|
| 4.0 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?<br>If yes, furnish particulars: ..... | YES | NO |
| 5.0 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?<br>If yes, furnish particulars: .....                         | YES | NO |

**SECTION H: MBD9: CERTIFICATE OF INDEPENDENT BID DETERMINATION**

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).<sup>2</sup> Collusive bidding is a pe se prohibition meaning that it cannot be justified under any grounds.

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

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

The following 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.

In order to give effect to the above, the following Certificate of Bid Determination must be completed and submitted with the bid. The undersigned, in submitting the accompanying bid, in response to the invitation for the bid do hereby make the following statements that I certify to be true and complete in every respect:

- 1.0 I have read and I understand the contents of this Certificate;
- 2.0 I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
- 3.0 I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
- 4.0 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;
- 5.0 For the purposes of this Certificate and the accompanying bid, I understand that the word “competitor” shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
  - a) has been requested to submit a bid in response to this bid invitation;
  - b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
  - c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
- 6.0 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium<sup>3</sup> will not be construed as collusive bidding. (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.
- 7.0 In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
  - a) prices;
  - b) geographical area where product or service will be rendered (market allocation);
  - c) methods, factors or formulas used to calculate prices;
  - d) the intention or decision to submit or not to submit, a bid;
  - e) the submission of a bid which does not meet the specifications and conditions of the bid;
  - f) bidding with the intention not to win the bid.
- 8.0 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.
- 9.0 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.
- 10.0 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.

**SECTION I: CONFIRMATIONS, AUTHORITIES, CERTIFICATIONS, ACKNOWLEDGEMENTS and SIGNATURES**

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

- 1.0 Confirms that the contents of these Consolidated MBD returnable questionnaires (comprising 8 pages) fall within my personal knowledge and are to the best of my Knowledge and belief, both true and correct;
- 2.0 Confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercise, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- 3.0 Confirms that no partner, member, director or other person, who wholly or partly exercise control over the enterprise, has within the last five years been convicted of fraud or corruption;
- 4.0 Confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- 5.0 Certify that the B-BBEE status level of contribution indicated in Section E.1: Item 1.0 qualifies the enterprise for preference points and acknowledges that the remedies as per Clause 14 of the Preferential Procurement Regulations (2017) shall apply. In the event of a contract being awarded as a result of points claimed, the enterprise may be required to furnish documentary proof to the satisfaction of the employer that the claims are correct;
- 6.0 Accept that, in addition to cancellation of a contract, action may be taken against me should these declarations prove to be false.

Signed ..... Date .....

Name ..... Position .....



**KEY PERSONNEL**

Refer to Clause F3.11.9 for Functionality Points evaluation prompts.

The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel (Contract’s Manager, Site Agent, and Foremen) which may have to be brought in from outside if not available locally.

| CATEGORY OF EMPLOYEE                          | NUMBER OF PERSONS                                    |   |
|---|--|---|
|   | KEY PERSONNEL, PART OF THE CONTRACTOR'S ORGANISATION | KEY PERSONNEL TO BE IMPORTED IF NOT AVAILABLE LOCALLY |
| Site Agent, Project Managers                  |  |   |
| Foremen, Quality Control and Safety Personnel |  |   |
| Technicians, Surveyors, etc                   |  |   |
| Artisans and other Skilled workers            |  |   |
| Plant Operators                               |  |   |
| Unskilled Workers                             |  |   |
| Others:.....                                  |  |   |
| .....   |  |   |

Note: CVs of key personnel may be requested during the contract period.

NAME : ..... (Block Capitals)

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

**EXPERIENCE OF KEY PERSONNEL**

Refer to Clause F3.11.9 for Functionality Points evaluation prompts.

The experience of assigned staff member in relation to the Scope of Work will be evaluated from three different points of view:

- 1) General experience (total duration of professional activity), level of education and training and positions held of each discipline specific team leader.
- 2) The education, training, skills and experience of the Assigned Staff in the specific sector, field, subject, etc which is directly linked to the scope of work.
- 3) The key staff members' / experts' knowledge of issues which the tenderer considers pertinent to the project e.g. local conditions, affected communities, legislation, techniques etc.

**A CV of the contract manager, site agent(s) and general foreman of not more than 2 pages should be attached to this schedule:**

Each CV should be structured under the following headings:

- a) Personal particulars
  - name
  - date and place of birth
  - place (s) of tertiary education and dates associated therewith
  - professional awards
- b) Qualifications (degrees, diplomas, grades of membership of professional societies and professional registrations)
- c) Skills
- d) Name of current employer and position in enterprise
- e) Overview of post graduate / diploma experience (year, organization and position)
- f) Outline of recent assignments / experience that has a bearing on the scope of work

NAME : ..... (Block Capitals)

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



**CONSTRUCTION APPROACH, METHODOLOGY, AND QUALITY CONTROL**

Refer to Clause F3.11.9 for Functionality Points evaluation prompts.

Construction Approach and Methodology

The construction approach and methodology must respond to the Scope of Work and outline the proposed approach to undertake the work showing a detailed programme including health and safety aspects, the use of plant and resources for this Project.

Quality Control

The quality control statement must discuss what tests and control measures are to be employed on site to attain the specified results and is to cover the program associated activities.

**The tenderer must attach his / her Construction Methodology and Quality Control information to this page.**

NAME : ..... (Block Capitals)

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



**PLANT and EQUIPMENT**

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

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

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

*Attach additional pages if more space is required*

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

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

*Attach additional pages if more space is required*

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

NAME : ..... (Block Capitals)

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

**CONTRACTOR'S HEALTH AND SAFETY PLAN**

Refer to Clause F3.11.9 for Functionality Points evaluation prompts.

At tender stage only a brief overview (**to be attached to this page**) of the tenderers perception on the safety requirements for this contract will be adequate.

Only the successful Tenderer shall submit separately the Contractor's Health and Safety Plan as required in terms of Regulation 7 of the Occupational Health and Safety Act 1993 Construction Regulations 2014.

The detailed safety plan will take into consideration the site specific risks as mentioned under Part C.3: Project Specification. A generic plan will not be acceptable.

NAME : ..... (Block Capitals)

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

**CONTRACTOR'S HEALTH AND SAFETY DECLARATION**

Refer to Clause F3.11.9 for Functionality Points evaluation prompts .

In terms of Clause 5(1)(h) of the OHS Act 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Principal Contractor may only be appointed to perform construction work if the Client is satisfied that the Principal Contractor has the necessary competencies and resources to carry out the work safely in accordance with the Occupational Health and Safety Act No 85 of 1993 and the OHS Act 1993 Construction Regulations 2014.

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

**Declaration by Tenderer**

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993), and the OHS Act 1993 Construction Regulations 2014.
2. I hereby declare that my company has the competence and the necessary resources to safely carry out the construction work under this contract in compliance with the Construction Regulations and the Employer's Health and Safety Specifications.
3. I propose to achieve compliance with the Regulations by one of the following:

Tenderers are to Circle Applicable

- |   |               |
|---|---------------|
| (a) From my own competent resources as detailed in 4(a) hereafter:  | <b>YES NO</b> |
| (b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter: | <b>YES NO</b> |
| (c) From outside sources by appointment of competent specialist Subcontractors as detailed in 4(c) hereafter:           | <b>YES NO</b> |

4. Details of resources I propose:

*(Note: Competent resources shall include safety personnel such as a construction supervisor and construction safety officer as defined in Regulation 8, and competent persons as defined in Regulations 9, 10, 11, 12, 13, 14, 16, 17, 20, 21, 22, 23(1), 24, 25, 26, 27, 28 and 29, as applicable).*

- (a) Details of the competent and qualified key persons from my company's own resources, who will form part of the contract team:

| NAMES OF COMPETENT PERSONS | POSITIONS TO BE FILLED BY COMPETENT PERSONS |
|----------------------------|---|
|                            |   |
|                            |   |
|                            |   |
|                            |   |

(b) Details of training of persons from my company's own resources (or to be hired) who still have to be trained to achieve the necessary competency:

(i) By whom will training be provided? .....

(ii) When will training be undertaken? .....

(iii) List the positions to be filled by persons to be trained or hired:  
.....  
.....

(c) Details of competent resources to be appointed as subcontractors if competent persons cannot be supplied from own company:

Name of proposed subcontractor: .....

Qualifications or details of competency of the subcontractor:  
.....  
.....

- 5. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable and sufficiently documented Health and Safety Plan in accordance with Regulation 7(1) of the Construction Regulations, which plan shall be subject to approval by the Client.
- 6. I confirm that copies of my company's approved Health and Safety Plan, the Client's Safety Specifications as well as the OHS 1993 Construction Regulations 2014 will be provided on site and will at all times be available for inspection by the Principal Contractor's personnel, the Client's personnel, the Employer's Agent, visitors, and officials and inspectors of the Department of Labour.
- 7. I hereby confirm that adequate provision has been made in my tendered rates and prices in the Bill of Quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the OHS 1993 Construction Regulations 2014, and that I will be liable for any penalties that may be applied by the Client in terms of the said Regulations (Regulation 33) for failure on the Principal Contractor's part to comply with the provisions of the Act and the Regulations.
- 8. I agree that my failure to complete and execute this declaration to the satisfaction of the Client will mean that I am unable to comply with the requirements of the OHS 1993 Construction Regulations 2014, and accept that my tender will be prejudiced and may be rejected at the discretion of the Client.

NAME : ..... (Block Capitals)

SIGNATURE : ..... DATE: .....

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

**JOINT VENTURES AGREEMENTS**

Joint Venture agreement and Power of Attorney Agreements to be attached here (if applicable).

**RECORD OF ADDENDA TO TENDER DOCUMENTS**

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

| ADD.No | DATE | TITLE OR DETAILS |
|--------|------|------------------|
| 1      |      |                  |
| 2      |      |                  |
| 3      |      |                  |
| 4      |      |                  |
| 5      |      |                  |
| 6      |      |                  |
| 7      |      |                  |
| 8      |      |                  |
| 9      |      |                  |
| 10     |      |                  |

NAME : ..... (Block Capitals)

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

**AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES**

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

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

**(a) AMENDMENTS**

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

- (1) *Amendments to the General and Special Conditions of Contract are not acceptable;*
- (2) *The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.*

**(b) ALTERNATIVES**

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

- (1) *Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.*
- (2) *In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.*
- (3) *Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.*

**(c) DISCOUNTS**

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

- (1) *The Tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced.*

NAME : ..... (Block Capitals)

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

**PART C1: AGREEMENT AND CONTRACT DATA**

**C1.1: FORM OF OFFER AND ACCEPTANCE**

**C1.1.1: OFFER**

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

Contract No: **WS7190**

Contract Title: **ESCOMBE – WALL ROAD SEWER RETICULATION**

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

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

**\* The offered total of the prices inclusive of Value Added Tax is:**

R..... (In words .....  
.....)

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.

**For the Tenderer:**

**\* Name of Tenderer (organisation)** : .....

**\* Signature (of person authorized to sign the tender)** : .....

**\* Name (of signatory in capitals)** : .....

**Capacity (of Signatory)** : .....

**Address** : .....

: .....

**Telephone** : .....

**Witness:**

**Signature** : ..... **Date** : .....

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

**Notes:**

**\* Indicates what information is mandatory.**

**Failure to complete the mandatory information and sign this form will invalidate the tender.**

**C1.1: FORM OF OFFER AND ACCEPTANCE**

**C1.1.2: FORM OF ACCEPTANCE**

**This Form will be completed by the Employer**

By signing this part of the Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

- Part C1 : Agreement and Contract Data, (which includes this Agreement)
- Part C2 : Pricing Data, including the Bill of Quantities
- Part C3 : Scope of Work
- Part C4 : Site Information

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

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

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. Failure to fulfill any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

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

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

**Name** (*of signatory in capitals*) : .....

**Capacity** (*of Signatory*) : .....

**Name of Employer** (*organisation*) : .....

**Address** : .....

: .....

**Witness:**

**Signature** : ..... **Date** : .....

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

**C1.1: FORM OF OFFER AND ACCEPTANCE**  
**C1.1.3: SCHEDULE OF DEVIATIONS**

**This form will be completed by THE EMPLOYER and ONLY THE SUCCESSFUL TENDERER**

- 1. **Subject** : .....
- Details** : .....
- : .....
- 2. **Subject** : .....
- Details** : .....
- : .....
- 3. **Subject** : .....
- Details** : .....
- : .....

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change 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.

**FOR THE TENDERER**

**FOR THE EMPLOYER**

|       |                             |       |
|-------|-----------------------------|-------|
| ..... | Signature                   | ..... |
| ..... | Name ( <i>in capitals</i> ) | ..... |
| ..... | Capacity                    | ..... |
| ..... | Name and Address of         | ..... |
| ..... | Organisation                | ..... |
| ..... |                             | ..... |
| ..... | Witness Signature           | ..... |
| ..... | Witness Name                | ..... |
| ..... | Date                        | ..... |

**C1.2: CONTRACT DATA****C1.2.1 CONDITIONS OF CONTRACT****C1.2.1.1 GENERAL CONDITIONS OF CONTRACT**

The Conditions of Contract are the General Conditions of Contract for Construction Works (2015 3<sup>rd</sup> Edition), (GCC 2015) published by the South African Institution of Civil Engineering. Copies of these conditions of contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805-5947, Fax: 011-805-5971, E-mail: [civilinfo@saice.org.za](mailto:civilinfo@saice.org.za)).

The Contract Data (including variations and additions) shall amplify, modify or supersede, the GCC 2015 to the extent specified below, and shall take precedence and shall govern.

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

**C1.2.2 CONTRACT DATA****C1.2.2.1 DATA TO BE PROVIDED BY THE EMPLOYER**

1.1.1.13 The **Defects Liability Period**, from the date of the Certificate of Completion, is **1 Year**.

1.1.1.14 The **time for achieving Practical Completion**, from the Commencement Date is **6 Months**. The period as stated in 5.3.2, and the 7 days referred to in 5.3.3, are included in the above time for achieving Practical Completion. The special non-working days as stated in 5.8.1 are excluded from the above time for achieving Practical Completion.

1.1.1.15 The Employer is the eThekweni Municipality as represented by:  
WATER AND SANITATION : Deputy Head: Engineering .

1.2.1.2 The address of the Employer is:

Physical: Water and Sanitation Building, 133 K.E. Masinga Road, DURBAN, 4001

Postal: P O Box 1038, DURBAN, 4000

Telephone: 031-311-8602 (t)

Fax: 031-311-8549(f)

E-Mail: [Bhavna.Soni@durban.gov.za](mailto:Bhavna.Soni@durban.gov.za)

1.1.1.16 The **name of the Employer's Agent** is Philip Bosch Pr. Eng

1.2.1.2 The address of the Employer' Agent is:

Physical: Water and Sanitation, 133 K.E. Masinga Road, DURBAN, 4001

Postal: P O Box 1038, DURBAN, 4000

Telephone: 031 311 8658 (t)

Fax: 031 311 8549 (f)

E-Mail: [Philip.Bosch@durban.gov.za](mailto:Philip.Bosch@durban.gov.za)

1.1.1.26 The **Pricing Strategy** is by **Re-measurement Contract**.

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:

- 6.3: Council approval in order to authorise any expenditure in excess of the Tender Sum plus **15%** contingencies.

5.3.1 The **documentation required** before commencement with Works execution are:

- **Health and Safety Plan (refer to Clause 4.3)**

- **Initial programme (refer to Clause 5.6)**
- **Security (refer to Clause 6.2)**
- **Insurance (refer to Clause 8.6)**

5.3.2 The **time to submit the documentation** required before commencement with Works is [**14 Days**].

5.3.3 Add the following paragraph:

“If a construction work permit, in terms of Clause 3(1) of the Construction Regulations (2014), is applicable, the instruction to commence carrying out of the works may only be issued once the construction work permit has been obtained by the Employer’s Agent. If a construction work permit is applicable, the contractor shall allow for a minimum period of 37 days, after the submission (or re-submission) of the documentation referred to in Clause 5.3.1., for the issuing of the construction work permit.”

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

5.8.1 The **non-working days** are **Saturdays and Sundays**.

(5.1.1) The **special non-working** days are:

- All statutory holidays as declared by National or Regional Government.
- The year-end break:
  - Commencing on the first working day after 15 December.
  - Work resumes on the first working day after 5 January of the next year.

5.8.1 Delete the words “sunset and sunrise” and replace with “17:00 and 07:00”.

5.12.2.2 **Abnormal Climatic Conditions (Rain Delays)** - The numbers of days per month, on which work is expected not to be possible as a result of rainfall, for which the Contractor shall make provision, is given in the table below. During the execution of the Works, the Employer’s Agent’s Representative will certify a day lost due to rainfall only if at least 75% of the work force and plant on site could not work during that specific working day.

Extension of time as a result of rainfall shall be calculated monthly being equal to the number days certified by the Employer’s Agent’s Representative as lost due to rainfall, less the number of days allowed for as in table below, which could result in a negative figure for certain months. The total extension of time for which the Contractor may apply, shall be the cumulative algebraic sum of the monthly extensions. Should the sum thus obtained be negative, the extension of time shall be taken as NIL.

| <u>Month</u> | <u>Days Lost</u> | <u>Average Rainfall</u> | <u>Month</u>   | <u>Days Lost</u> | <u>Average Rainfall</u> |
|--------------|------------------|-------------------------|--|------------------|-------------------------|
| January      | 4*               | 134                     | July   | 1                | 39                      |
| February     | 3                | 113                     | August   | 2                | 62                      |
| March        | 3                | 120                     | September  | 2                | 73                      |
| April        | 2                | 73                      | October  | 3                | 98                      |
| May          | 2                | 59                      | November   | 3                | 108                     |
| June         | 1                | 28                      | December   | 1*               | 102                     |
| TOTAL        | 27               | 1009mm                  | * = The number of working days lost allows for the annual statutory Construction holiday in December and January of each year. |                  |                         |

5.13.1 The **penalty for delay** in failing to complete the Works is **R 2500** (per Day).

5.14.1 The **requirements for achieving Practical Completion** will be determined by the Employer’s Agent (in consultation with the Contractor) and recorded in the minutes of the first Site Meeting / Handover Meeting. (Refer to 1.1.1.24 for a generic definition.) The requirements are to be regularly reviewed with respect to any variations to the Contract.

5.16.3 The **latent defect liability** period is **10 Years**.

6.2.1 **Security (Performance Guarantee):** Delete the word “selected” and replace it with “stated”.

The liability of the Performance Guarantee shall be as per the following table:

| Value of Contract (incl. VAT)                     | Performance Guarantee Required |
|---|--------------------------------|
| Less than or equal to R 1m                        | Nil                            |
| Greater than R 1m and less than or equal to R 10m | 5% of the Contract Sum         |
| Greater than R 10m                                | 10% of the Contract Sum        |

6.8.2 **Contract Price Adjustment Factor:** The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule (GCC 2015 - page 86) with the following Indices / Descriptions / Coefficients:

- The proportion not subject to adjustment: **x = 0.10**.
- The base month will be the month prior to the month in which tenders close.
- The Index shall be based on **December 2020 = 100**.

|   | STATS SA Statistical Release | Table   | Description   | Coefficient |
|---|------------------------------|---------|---|-------------|
| • “L” is the “Labour Index”                 | P0141                        | Table A | Geographic Indices; CPI per Province; Kwa-Zulu Natal  | a = 0.28    |
| • “P” is the “Contractor’s Equipment Index” | P0151.1                      | Table 4 | Plant and Equipment   | b = 0.28    |
| • “M” is the “Materials Index”              | P0151.1                      | Table 6 | Civil Engineering Material (excluding bitumen)  | c = 0.38    |
| • “F” is the “Fuel Index”                   | P0142.1                      | Table 1 | Coke, petroleum, chemical, rubber and plastic products; Coal and petroleum products; Diesel | d = 0.06    |

6.8.3 Price adjustments for **variation in the cost of the special material(s)** listed below, will be allowed.

**Bitumen** - escalation will be calculated using the “Rise and Fall” method as determined by the Employer. The base price for bitumen on this contract shall be the ruling price of 40/50 grade bitumen from the Durban SAPREF, seven (7) days prior to the closing date of tenders.

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

The **percentage advance** on Plant not yet supplied to Site: **Not Required**

- 6.10.3 **Retention Money:** Delete the word “selected”.  
 The percentage retention on the amounts due to the Contractor is 10%.  
 The limit of “retention money” is 5% of the Contract Sum.  
 Should the Contract Price exceed the Contract Sum then the limit of “retention money” is 5% of the Contract Price.  
 Interest will not be paid on retention withheld by the Employer.
- 8.6.1.1.2 The **value of Plant and materials** supplied by the Employer to be included in the insurance sum: **Not Required.**
- 8.6.1.1.3 The **amount to cover professional fees** for repairing damage and loss to be included in the insurance sum: **Not Required.**
- 8.6.1.2 **SASRIA Coupon Policy** for Special Risks to be issued in joint names of Council and Contractor for the full value of the works (including VAT).
- 8.6.1.3 The limit of indemnity for **liability insurance: R 15,000,000.**
- 8.6.1.4 **Ground Support Insurance:**
- Minimum amount for any one occurrence, unlimited as to the number of occurrences, against any claim for damages or loss caused by vibration and / or removal of lateral support: **R 1,000,000.**
  - Maximum first excess: **R 15,000.**
- 8.6.1.5 Furthermore, the insurance cover effected by the Contractor shall meet the following requirements:
- Third Party Insurance (Public Liability)**
- Minimum amount for any one occurrence, unlimited as to the number of occurrences, for the period of the contract, inclusive of the maintenance period: **R 5,000,000.**
  - Consequential loss to be covered by policy: **Yes**
  - Liability section of policy to be extended to cover blasting: **Nil.**
  - Maximum excess per claim or series of claims arising out of any one occurrence: **R30,000.**
- Principal’s own surrounding Property Insurance**
- Minimum amount for any one occurrence unlimited as to the number of occurrences against any claim for damage which may occur to the Council’s own surrounding property: **R1,000,000.**
  - Maximum first excess: **R 20,000.**
- Insurance of Works**
- Minimum amount for additional removal of debris (no damage): **R 500,000.**
  - Minimum amount for temporary storage of materials off site, excluding Contractor’s own premises: **Nil.**
  - Minimum amount for transit of materials to site: **Nil.**
- 8.6.5 **Approval by Employer:** At the end of the sub-clause, add the following paragraph:

"Except where otherwise provided in the Special Conditions of Contract, the insurance cover effected by the Contractor in terms of this clause shall not carry a first loss amount greater than those set out below:

| Contract Price      | First Loss |
|---------------------|------------|
| Less than R 100,000 | R 5,000    |

|                            |          |
|----------------------------|----------|
| R 100,000 to R 500,000     | R 10,000 |
| R 500,000 to R 1,000,000   | R 20,000 |
| R 1,000,000 to R 2,000,000 | R 30,000 |
| R 2,000,000 to R 4,000,000 | R 40,000 |
| Greater than R 4,000,000   | R 50,000 |

The insurance policy shall contain a specific provision whereby cancellation of the policy prior to the end of the period referred to in Cause 8.2.1 cannot take place without the prior written approval of the Employer.”

10.5.1 **Dispute resolution** shall be by standing adjudication.

10.7.1 Failing ad-hoc adjudication, the determination of disputes shall be by arbitration.

**C1.2.2.2 DATA TO BE PROVIDED BY CONTRACTOR**

1.1.1.9 The legal name of Contractor is:

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

1.2.1.2 The Physical address of the Contractor is:

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

The Postal address of the Contractor is:

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

The contact numbers of the Contractor are:

Telephone: .....

Fax: .....

The E-Mail address of the Contractor is:

.....

### C1.2.3 ADDITIONAL CONDITIONS OF CONTRACT

#### C1.2.3.1 COMMUNITY LIAISON OFFICER

The Ward Councillor(s) in whose ward(s) work is to be done will, collectively, identify a community liaison officer (CLO) for the project and make the person known to the Contractor within two days of being requested to do so. The Contractor will be required to enter a written contract with the CLO that specifies:

- The hours of work and the wage rate of the CLO (200% of the Civil Engineering Industry minimum wage).
- The duration of the appointment.
- The duties to be undertaken by the CLO which could include:
  - Assisting in all respects relating to the recruitment of local labour.
  - Acting as a source of information for the community and councillors on issues related to the contract.
  - Keeping the Contractor advised on community issues and issues pertaining to local security.
  - Assisting in setting up any meetings or negotiations with affected parties.
  - Keeping a written record of any labour or community issue that may arise.
  - Any other duties that may be required by the Contractor.

Responsibility for the identification of a pool of suitable labour shall rest with the CLO, although the Contractor shall have the right to choose from that pool. The Contractor shall have the right to determine the total number labourers required at any one time and this may vary during the contract.

The Contractor shall have the right to replace labour that is not performing adequately. Should such occasion arise, it must be done in conjunction with the CLO.

Payment: The CLO will be reimbursed from the PC Sum item in the Preliminary & General Section of the Bill of Quantities.

#### C1.2.3.2 EMPLOYMENT OF LOCAL LABOUR

It is a condition of contract that the contractor will be required to employ local labour as specified in eThekweni Council Policy “The use of CLOs and Local Labour”. The contractor will be required to ensure that a minimum of 50% of the labour force is made up of local labour. For the purposes of this contract, “Local labour” will be deemed to be any **persons who reside within Ward 63**. The contractor will be required to provide proof of authenticity of local labour. Signed confirmation by the appointed CLO will suffice for this.

No additional costs will be entertained due to this Particular Specification. The contractor will remain responsible for providing proper supervision of all labour and will be responsible for the quality of work produced.

#### C1.2.3.3 CONTRACTOR PARTICIPATION GOAL (CPG)

It is a condition of contract that the contractor must allow for a minimum of **30%** of the contract value (excluding PC Sum items and Fixed Cost allowances) to be subcontracted to contractors who are >76% PPG (Priority Population Group) owned. Proof of payment to the subcontractors will be required to verify that the minimum has been achieved.

The penalty for not achieving the specified CPG will be 0.5% of the contract value (excluding PC Sum items and Fixed Cost allowances) for every 1% of CPG not achieved.

**C1.2.3.4 FTE (Full Time Equivalent) EMPLOYMENT INFORMATION**

It is a condition of contract that the Contractor supplies the Employer’s Agent’s Representative with information in respect of the employment of all foremen, artisans and labour (skilled and unskilled) employed to work on this contract. The information required is:

- Initials (per ID doc)
- Last Name (per ID doc)
- ID Number
- Disability (y / n)
- Education Level

|                             |                                |                               |                            |                                |
|-----------------------------|--------------------------------|-------------------------------|----------------------------|--------------------------------|
| <b>Level 1</b><br>Unknown   | <b>Level 2</b><br>No Schooling | <b>Level 3</b><br>Grade 1-3   | <b>Level 4</b><br>Grade 4  | <b>Level 5</b><br>Grade 5-6    |
| <b>Level 6</b><br>Grade 7-8 | <b>Level 7</b><br>Grade 9      | <b>Level 8</b><br>Grade 10-11 | <b>Level 9</b><br>Grade 12 | <b>Level 10</b><br>Post Matric |

- Category of Employment

|   |
|---|
| <p><b>Category A:</b> Employed as Local Labour for this contract only<br/> <b>Category B:</b> Temporarily employed by the Contractor<br/> <b>Category C:</b> Permanently employed by the Contractor</p> |
|---|

In addition, the following information is required in respect of each person listed above, on a monthly basis:

- Number of days worked during the month;
- Daily wage rate;
- Number of training days during the month.

The information is to be forwarded in a format acceptable to the Employer’s Agent’s Representative, but preferably in the form of an emailed EXCEL file (an original file, to be used as a template, will be issued to the Contractor). Contractors without computer facilities will be required to submit a hard copy of the information in a format as agreed to between the Contractor and the Employer’s Agent’s Representative.

In addition to the tax invoice, to be submitted by the Contractor with his monthly statement, mentioned in Clause 6.10.4 of GCC 2015, the Employer reserves the right to withhold payment until the monthly FTE information has been forwarded to the Employer’s Agent’s Representative. No additional payment for complying with the above will be made and the Contractor is to make allowance for complying through the time related P & G items (sum) under Part AA: Preliminaries, of the Bill of Quantities.

**C1.2.3.5 PERFORMANCE MONITORING OF SERVICE PROVIDERS**

The Contractor shall be subjected to “Performance Monitoring” assessments in terms of the applicable Section of the Employer’s Supply Chain Management Policy.

Key Performance Indicators (KPIs) are specified in the Part C3: Scope of Works, or will be discussed and agreed with the Contractor before commencement of the contract.

**C1.2.3.6 DAMAGE TO PERSONS AND PROPERTY**

1. The supplier **shall** indemnify and keep indemnified the Council against any claim for death, injury or loss to any person or property whatsoever in respect thereof or in relation thereto.

2. The supplier enters into this contract as an independent contractor and shall be solely liable in respect to any claim for death, injury, damage or loss to any person or property whatsoever in respect thereof or in relation thereto.

#### **C1.2.3.7 EXCEPTED RISKS (Clause 8.3)**

Pursuant to Clause 8.3 of the Conditions of Contract (GCC 2015), the Employer shall not be liable for the payment of standing time costs as a result of the occurrence of any of the “Excepted Risks” as defined under Clause 8.3.

However, the Employer shall reimburse the Contractor in respect of plant de-establishment and re-establishment costs as a result of “Excepted risks” when a written instruction to de-establish is issued to the Contractor.

## **C2.1: PRICING ASSUMPTIONS / INSTRUCTIONS**

### **C2.1.1 GENERAL**

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents (refer to F.1.2 of the Tender Data).

### **C2.1.2 PRICING INSTRUCTIONS AND DESCRIPTION OF ITEMS IN THE SCHEDULE**

Measurement and payment shall be in accordance with the relevant provisions of Clause 8 of each of the Standard Engineering Specifications referred to in the Scope of Work. The Preliminary and General items shall be measured in accordance with the provisions of C2.1.8.

The descriptions of the items in the Bill of Quantities are for identification purposes only and comply generally with those in the Standard Engineering Specification.

Clause 8 of each Standard Engineering Specification, read together with the relevant clauses of the Scope of the works, set out what ancillary or associated work and activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standard Engineering Specification, or the Scope of the works, conflict with the Bill of Quantities, the requirements of the Standard Engineering Specification or Scope of the work, as applicable, shall prevail.

### **C2.1.3 QUANTITIES REFLECTED IN THE SCHEDULE**

The quantities given in the Bill of Quantities are estimates only, and subject to re-measuring during the execution of the work. The Contractor shall obtain the Employer's Agent's detailed instructions for all work before ordering any materials or executing work or making arrangements for it.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the General and Special Conditions of Contract, the Specifications and Project Specifications and the Drawings. Unless otherwise stated, items are measured

net in accordance with the Drawings, and no allowance has been made for waste.

The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

### **C2.1.5 MONTHLY PAYMENTS**

Unless otherwise specified in the Specifications and Project Specifications, progress payments in Interim Certificates, referred to in Clause 6.10.1 of the General Conditions of Contract, in respect of "sum" items in the Bill of Quantities shall be by means of interim progress instalments assessed by the Employer's Agent and based on the measure in which the work actually carried out relates to the extent of the work to be done by the Contractor.

### **C2.1.4 PROVISIONAL SUMS / PRIME COST SUMS**

Where Provisional Sums or Prime Cost sums (PC Sum) are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Employer before closure of tenders. Any unauthorized changes made by the Tenderer to provisional items in the schedule, or to the provisional percentages and sums in the Summary of the Bill of Quantities, will be treated as arithmetical errors.

### **C2.1.6 PRICING OF THE BILL OF QUANTITIES**

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to

be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based.

Each item shall be priced and extended to the "Total" column by the Tenderer, with the exception of the items for which only rates are required (Rate Only), or items which already have Prime Cost or Provisional Sums affixed thereto. If the Contractor omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

All rates and amounts quoted in the Bill of Quantities shall be in Rands and Cents and shall include all levies and taxes (other than VAT). VAT will be added in the Summary of the Bill of Quantities.

#### **C2.1.7 "RATE ONLY" ITEMS**

The Tenderer shall fill in rates for all items where the words "Rate Only" appear in the "Total" column. "Rate Only" items have been included where:

- (a) an alternative item or material is contemplated;
- (b) variations of specified components in the make-up of a pay item may be expected; and
- (c) no work under the item is foreseen at tender stage but the possibility that such work may be required is not excluded.

For "Rate Only" items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The

Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

#### **C2.1.8 PRELIMINARY AND GENERAL**

The Preliminary and General Section is provided to cover the Contractor's expenses incurred in complying with the requirements of the tender documents and consists of the following parts:

- Part AA: Preliminaries
- Part AB: General Specifications
- Part AH: Occupational Health and Safety

**Fixed Charge Items:** Each item should be priced separately and, subject to the Engineer certifying in terms of Clause 6.7 of the General Conditions of Contract that the work has been done, payment will be made as follows:

- (i) the total amount due when the certified value fixed charge items in this section is less than 5% of the net contract price;
- (ii) when the certified value of fixed charge items in this section is greater than 5% of the net contract price, payment will be limited to 5% of the net contract price. The remainder will be paid when the value of the work done under the contract, excluding the value of fixed charge items in this section, is greater than 50% of the net contract price, excluding the value of fixed charge items in this section.

**Time Related Items:** Any Time Related items not priced shall be deemed to be covered by the prices of other items in the section.

Payment of Time Related items in this section will be made throughout the contract period, the amount per month being the value of the item divided by the completion in months or, if specified in weeks, the equivalent number of months, in terms of Clause 5.5 of the General Conditions of Contract. The final monthly increment will only be paid upon the issue of a completion certificate.

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**C2.2: BILL OF QUANTITIES**

The Bill of Quantities follows and comprises of 11 pages. The pages are numbered BoQ 1 to BoQ 11.

**PART C3: SCOPE OF WORK**

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### **C3.1: PROJECT DESCRIPTION AND SCOPE OF CONTRACT**

#### **C3.1.1 Description of Works**

This project entails the construction of a sewer reticulation to service 65 units and crossing the M7 Highway before tie-in into the existing gravity sewer at Middleton Road.

##### **C3.1.1.1 Reticulation for 65 Units**

A 160mm diameter HDuPVC pipe will be laid along property boundaries and in the road servitude for an approximate length of 2565m.

##### **C.1.1.2.1 Pipe Jacking**

This section entails the pipe jacking of a 1200mm diameter (class 100D) concrete pipe sleeve under the M7 Highway for a distance of 46m with a 160mm diameter HDuPVC pipe inside.

#### **C3.1.2 Nature of Ground and Subsoil Conditions**

A geotechnical investigation was conducted for this project and a report with findings is located under Item C4.2 of this tender document. The onus is on the contractor to be familiar with the contents of the report as provided and make reasonable allowances in the relevant section in the Schedule of Quantities.

| TOPIC                                   | COMMENTARY   |
|---|--|
| <b>Client's / employer's objectives</b> | eThekweni Municipality's objective is to provide sustainable and quality sanitation service to the residents of Escombe, in ward 63.   |
| <b>Description of the services</b>      | The service to be provided through this Contract is waterborne sewerage service with house connections and an access facility underneath the M7 Highway to tie-in to existing infrastructure on the other side of the highway.   |
| <b>Extent of the services</b>           | <p>The broad extent of the works for this contract will include, but is not limited to, the following:</p> <p>This project entails the construction of a sewer reticulation to service 65 units and crossing the M7 Highway before tie-in into the existing gravity sewer at Middleton Road.</p> <p><u>Reticulation for 65 Units</u><br/>A 160mm diameter HDuPVC (class 34) pipe will be laid along property boundaries and in the road servitude for an approximate length of 2565m.</p> <p><u>Pipe Jacking</u><br/>This section entails the pipe jacking of a 1200mm diameter (class 100D) concrete pipe sleeve under the M7 Highway for a distance of 46m with a 160mm diameter HDuPVC inside</p> <p>The scope of work is made up as follows:</p> <ul style="list-style-type: none"> <li>• Conventional open trench for the sewer pipe</li> <li>• Prepare pipe bedding, lay the pipe, backfill and compact</li> <li>• Build new manholes and construct benching</li> <li>• General reinstatement along pipeline route and road surfaces</li> <li>• Connection into existing live sewer line and new sewers</li> </ul> <p>Such other works as may be deemed necessary by Engineer for the completion of the project.</p> |
| <b>Use of reasonable skill and care</b> | <p><u>For the pipe jacking:</u> Normal surveying equipment is adequate to provide accurate survey between the thrust and reception shafts. It is advised that initial survey be carried out twice using independent survey stations and preferably different surveyors.</p> <p><u>Work within Private Properties:</u> Entry to any property is strictly as per the requirements of the homeowner and labourers shall maintain a cordial approach when discussing any component of the works with the homeowner or his representatives. When trenching across driveways, the contractor shall liaise with each homeowner and establish a timeframe for the completion of each driveway. The contractor shall then liaise with the homeowner throughout the process and ensure that the driveway is completed by the agreed timeframe</p> <p><u>Work within Private Properties:</u> Works in the road reserve shall be carried out with extreme care and diligence to ensure that there is no disruption or damage to services.</p>  |

| TOPIC   | COMMENTARY  |
|---|---|
| <p><b>Co-operation with other services providers</b></p>      | <p>The KZN Department of Transport is the Custodian of the M7 Highway and thus upon receipt of the Letter of Award the Main Contractor must initiate contact with the department to discuss the Method Statement and Timeframes of the pipe jacking.</p> <p>All interaction with various departments such as Water and Sanitation, Electricity, Telkom and Neotel are to run parallel to construction works should any of the above services be affected.</p>   |
| <p><b>Applicable national and international standards</b></p> | <p>All construction works on this contract should comply with SANS 1200.</p>  |
| <p><b>Access to land / buildings / sites</b></p>              | <p>The location of site is shown on the locality plan (see section C4.1). The access to the works is via the M7 Highway, the Main Road (M5) and through Kewley Road.</p> <p>This project is situated in Queensburgh, Escombe area. The site of works is situated in an area with existing residential units along with steep terrains. The pipeline routes pass through road reserves and private property. This implies that a portion of the works will not be accessible by machinery therefore it will be necessary to undertake a large proportion of the pipe trenching and other works by hand.</p> <p>The Contractor shall be responsible for the maintenance and reinstatement of damage caused by him or his agents / deliveries to vehicular access tracks and rights of way. The Council and the property owners shall be indemnified against any damages or claims arising from the use of any tracks and rights of way by the Contractor or his agents / deliveries.</p> <p><u>Property Access:</u><br/>The Contractor shall give written notice to the owner of each property crossed by the sewer, of construction work to be undertaken on the property at least 7 days prior to commencement of work on the property.</p> <p>The Contractor shall keep the occupants of affected properties advised at all times prior to disrupting access to, or egress from the properties.</p> <p>Vehicular and pedestrian access may not be denied to occupants of affected properties unless prior approval has been obtained in writing from the occupants concerned and the Engineer.</p> <p>The Contractor shall take cognisance of the aforementioned items concerning roads and tracks and allow for any costs in his tender under the relevant section in the Schedule of Quantities.</p> <p><u>M7 Highway Access:</u><br/>The Kwa-Zulu Natal Department of Transport (DoT) is the Custodian of the M7 Highway and are the issuers of the permits to encroach the M7 Highway. EWS has been granted a permit to encroach the M7 Highway (P82) i.e., encroachment consent no. 3899</p> <p>The Project Engineer will notify DoT prior to commencing with any activities related to pipe jacking. They will send their personnel for induction and present the conditions to be met for the permit to remain valid.</p> |
| <p><b>Planning and programming</b></p>                        | <p>For project management purposes, the Main Contractor is to submit both a project programme and an estimated monthly cashflow projection to the Engineer's Representative.</p> <p>The project programme must show the pipe bridging works commencing simultaneously with the reticulation works.</p>  |

| TOPIC   | COMMENTARY   |
|---|--|
| <b>Quality management</b>                         | The successful tenderer shall implement specific quality control measures to ensure that the works are constructed as per the standard specifications, project specifications and construction drawings. The Quality Management Plan shall be attached to returnable form “Construction Approach, Methodology and Quality Control” and reference shall be made to site control testing, construction supervision, structured monitoring mechanisms such as checklists and other measures/processes that the tenderer deems to be significant. The Engineer will continually assess the quality of works on site and instructions will be provided for non-compliance accordingly.  |
| <b>Format of communications</b>                   | <p>Each instruction, certificate, submission, proposal, record, acceptance, notification, reply and other communication which this contract requires is to be communicated in a form which can be read, copied and recorded. Writing is to be in the language of this contract, i.e. English.</p> <p>The contractor is to only receive instructions from the Engineer or the Engineer’s representative. Should the contractor undertake any works from an instruction given to him by a third party, he will be solely responsible for any impacts thereof, including costs.</p>   |
| <b>Management meetings</b>                        | There will be a minimum of two (2) progress meetings per month. The contractor is to ensure that the Contracts Manager and Site Agent are present during this meeting. The CLO will be required to attend all progress meetings. This is over and above all meetings that the Contractor may deem necessary for the execution of the works.  |
| <b>Daily records</b>                              | <p>It is a requirement that a site diary with all relevant details be maintained on site. This diary must be signed off and agreed to by both the Engineer and Contractor, on a daily basis. These site diaries must accompany the Contractor’s monthly payment certificates and payment shall not be processed should this not be complied to.</p> <p>A suitable format of the site diary will be made available to the successful tenderer, by the Client.</p>   |
| <b>Payment certificates</b>                       | <p>Payment certificates are to reach the Client by the 25<sup>th</sup> of each month or any day as directed by the Client. The following items are to accompany each payment certificate, but shall not be limited to the list below:</p> <ul style="list-style-type: none"> <li>• Tax Invoice – Tax invoice number, Contract number, Project Description, correctly dated, to include both the Client’s and contractor’s Tax numbers, physical and postal addresses and to be addressed to Deputy Head: Water and Sanitation.</li> <li>• Fully completed FTE’s (Client to provide format)</li> <li>• Summary of supporting agreed measurements for period of claim – to be signed off by both the Contractor and Engineer.</li> </ul> |
| <b>Property provided for the Contractor’s use</b> | Where possible, the Employer and/or Engineer will initially identify a proposed location for the Contractor’s camp site and storage yard, however, the responsibility lies on the Contractor to liaise with the CLO/Ward Councillor in order to locate a suitable site that is available for occupation. Strict adherence to PS.9 “Site Facilities Available” is to be maintained at all times and the Contractor will be responsible for any transgressions in this regard.   |

**C3.2: PROJECT SPECIFICATION****PREAMBLE**

In the event of any discrepancy between a part or parts of the Standard or Particular Specifications and the Project Specification, the Project Specification shall take precedence. In the event of a discrepancy between the Specifications, (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Employer's Agent before the execution of the work under the relevant item.

**C3.2.1 GENERAL****PS.1 PROGRAMME, METHOD OF WORK, AND ACCOMMODATION OF TRAFFIC**

This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2.

**PS.1.1 Preliminary Programme**

The Contractor shall include with his tender a preliminary programme on the prescribed form (see Part T2.2: Preliminary Programme) to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

Tenderers may submit tenders for an alternative Time for Completion in addition to a tender based on the specified Time for Completion. Each such alternative tender shall include a preliminary programme similar to the programme above for the execution of the works, and shall motivate his proposal clearly by stating all the financial implications of the alternative completion time.

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions (refer to Clause 5.12.2.2) and special non-working days (refer to Clause 5.1.1.1) as specified in the in the Contract Data.

**PS.1.2 Programme in Terms of Clause 5.6 of the General Conditions of Contract**

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data (refer to Clause 5.3.1/2).

The preliminary programme to be submitted with the tender shall be used as basis for this programme.

The Tenderer's attention is drawn to the fact that a number of factors will affect the programming of and method of carrying out the works. The more important of these are:

- (1) Time required for service relocations.
- (2) Time allowances to be made for the ordering of special items.
- (3) Notification required by service organisations.

- (4) Any special sequence in which work must be carried out. Must certain areas of work be finished before work commences on others?
- (5) If delays are anticipated with service relocations the contractor should be asked to allow time.
- (6) Liaison with homeowners to schedule works and timeframes for completion
- (7) Vehicular access to private property is to be maintained.
- (8) Traffic restrictions.

Those known, existing services in the area of the works have been depicted on the contract drawings. It is evident, however, that the status of existing service records as far as can be ascertained might not reflect the actual situation in the field. As such, due allowance has been made in the Bill of Quantities for the proving of services where directed by the Engineer.

### **PS.1.3 Requirements for Accommodation of Traffic**

#### **PS.1.3.1 General**

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

Clause 4.10.4 of SANS 1921-2: 2004 shall be replaced with the following:

“Road signs and markings shall comply with the requirements of “The South African Road Traffic Signs Manual - Volume 2: Roadworks Signing”.

#### **PS.1.3.2 Basic Requirements**

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

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

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

The Contractor may not commence constructional activities affecting existing roads before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual.

The Contractor shall construct and maintain all temporary drainage works necessary for temporary deviations. The Contractor shall ensure that the existing property accesses are maintained at all times. Where necessary the Contractor shall make allowance in the rates for completing the work required to the accesses out of normal hours.

**PS.1.3.3 Traffic Safety Officer**

Where warranted by traffic conditions on or near the site, the Contractor shall nominate a suitable member of his staff as traffic safety officer to be responsible for the arrangement and maintenance of all the measures for the accommodation of traffic for the duration of the project. Duties of the traffic safety officer shall be in compliance with the Occupational Health and Safety Act 1993 and the Construction Regulations 2014.

**PS.1.3.4 Payment**

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

**PS.1.3.5 Pedestrian movement**

The Contractor shall make provision for accommodating all pedestrian movements in the area of the works. Allowance shall be made in the relevant rates for any barricades and signs required.

**PS.1.3.6 Temporary Reinstatement**

Provided always that if in the course or for the purpose of the execution of the works or any part thereof any road or way shall have been broken up, then notwithstanding anything herein contained:

- (a) if the permanent reinstatement of such road or way is to be carried out by the appropriate authority or by some person other than the contractor (or any subcontractor to him), the contractor shall at his own cost and independently of any requirement of or notice from the Engineer be responsible for the making good of any subsidence or shrinkage or other defect, imperfection or fault in the temporary reinstatement of such road or way, and for the execution of any necessary repair or amendment thereof from whatever cause the necessity arises, until the end of the period of maintenance in respect of works beneath such road or way until the authority or other person as aforesaid shall have taken possession of the site for the purpose of carrying out permanent reinstatement (whichever is the earlier), and shall indemnify and save harmless that Council against and from any damage or injury to the Council or to third parties arising out of or in consequence of any neglect or failure of the Contractor to comply with the foregoing obligations or any of them and against and from all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.
- (b) where the authority or person as aforesaid shall take possession of the site as aforesaid in sections or lengths, the responsibility of the contractor under paragraph (a) of this sub-clause shall cease in regard to any such section or length at the time possession thereof is so taken, but shall during the continuance of the said period of maintenance continue in regard to any length of which possession has not been taken and the indemnity given by the contractor under the said paragraph shall be construed and have effect accordingly.

**PS.2 SERVICES**

This Clause is to be read in conjunction with the provisions and obligations as contained in SANS 1921-1 and SANS 1921-2.

### **PS.2.1 Existing Services**

The Tenderer's attention is drawn to the numerous existing services in the area. All services, as reflected on eThekweni's GIS System, should be shown on the construction drawings. It should be noted, however, that the information reflected on the drawings is based on data available at the time of preparing the drawings and that additional services could have subsequently been installed. The positions shown on the drawing must therefore be regarded as an approximation and it is essential that GIS be inspected prior to any excavation being carried out.

All known existing services have been indicated on the drawings. The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced.

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

The following existing services are known to exist in the vicinity of the proposed works:

- Overhead Electricity Cables (Eskom and eThekweni Municipality)
- Telkom/Neotel Cables
- Municipal Watermains
- Municipal Sewers
- Municipal Stormwater Pipes, Manholes and Catchpits.

### **PS.2.2 Proving Underground Services**

This clause must be read in conjunction with Clause DB.5.1.2, the requirements of which shall be extended to cover all earthworks operations whether for trenching or bulk earthworks, in the vicinity of underground services.

It is stressed that all services in a particular area must be proven before commencing work in that area.

Insofar as bulk earthworks are concerned, where services are indicated on the drawings or where from site observations can reasonably be expected that such services are likely to exist where excavations are to take place, the Contractor shall without instructions from the Employer's Agent carefully excavate by hand to expose and prove their positions.

The cost of the proving trenches is to be included in the work covered by Clause DA.8.3.

When a service is not located in its expected position the Contractor shall immediately report such circumstances to the Employer's Agent who will decide what further searching or other necessary action is to be carried out and shall instruct the Contractor accordingly. The cost of this additional searching shall be to the Council's cost and shall be paid for under DB.8.19 - Proving Existing Services.

Should any service be damaged by the Contractor in carrying out the works and should it be found that the procedure as laid down in this clause has not been followed then all costs in connection

with the repair of the service will be to the Contractor's account.

When electrical cables are not in the positions shown on drawings of eThekwini Electricity and cannot be found after proving trenches have been put down, assistance may be obtained by calling an official of the Works Branch on Telephone No. 311-1111 during office hours, or by contacting Control on Telephone No. 305-7171 after hours.

It should be noted that 33,000 Volt and 132,000 Volt cables may only be exposed by the eThekwini Electricity's personnel. The cables are usually protected by concrete covering slabs, and therefore if the slabs are inadvertently exposed, excavation work must stop, and the eThekwini Electricity shall be contacted immediately on the above telephone numbers.

Proving of services shall be completed at least two weeks in advance of the actual programmed date for commencing work in the area. The position of these services located must be co-ordinated and levelled by the Contractor, and the information given in writing to the Employer's Agent's Representative.

The requirements of this clause do not relieve the Contractor of any obligations as detailed in the Conditions of Contract or under Clause 4.17 of SANS 1921-1.

### **PS.2.3 New Services and Relocation of Existing**

This clause shall be read in conjunction with Clause PS.1.

New services are either to be installed by the Contractor as part of the contract or by others during the contract period. In the latter case excavation and subsequent backfilling of the trench from the top of the bedding layer shall generally be carried out by the Contractor.

Relocation of services shall generally be carried out by the relevant services organisation. Generally their work shall include the excavating and bedding the service which will include backfilling to a depth of approximately 300 mm above the service. The remainder of the backfilling shall be carried out by the Contractor.

Generally work shall only commence on the installation of new services once the bulk earthworks have been completed and roughly trimmed to level along a substantial portion of the services route. In addition no sidewalk, verge, median or island shall be surfaced or topsoiled until all work on the services has been completed.

Services affected by the contract are described as follows:

- PS.3: Watermains;
- PS.4: Sewers;
- PS.5: Stormwater;
- PS.6: Electrical Plant
- PS.7: Telkom / Neotel;
- PS.8: CCTV;

Further to the above, tenderers are referred to the services drawing and are to note that several minor cables / pipes may be encountered during excavation works which may require to be relocated to some extent. It is anticipated that the two week period required under PS.2.2 will allow sufficient time for these relocations.

**PS.2.4 Accommodation of Services**

Further to Clauses PS.1 and PS.2 of this specification, tenderers are to note that allowance must be made under this item and / or the appropriate rates, for all costs incurred as a result of complying with these clauses. It shall also cover liaison with the services organisations and accommodation of their work gangs / contractors on site.

**PS.3 WATERMAINS****PS.3.1 General**

Tenderer's attention is drawn to the following points regarding the watermains to be installed as part of this contract.

**PS.3.2 Water Main Valve Access**

Due to the dangerous situation occurring when water main valves are covered over, the Contractor shall maintain access to all water main valves at all times. During asphalt layer work, after each pass by the paving machine, the valves shall be exposed and access maintained in a safe condition.

Whatever method the Contractor chooses to use for this work, the cost of raising the valves from existing level to ultimate level shall be paid only once, irrespective of the number of times the valve is uncovered. Spacer rings required for the height adjustment of valve covers shall be supplied by the Water and Sanitation Unit. Tolerances on valve cover levels shall be as specified in clause PH.6.5. Before final setting in position of valve covers the Contractor shall liaise with the Employer's Agent regarding the direction in which covers shall be placed.

**PS.3.3 Restriction on Compactive Equipment**

The Contractor is to note that existing watermains traverse the site of the works and special care is to be taken in close proximity to these mains and connections. The existing mains and connections shall be proved on site by the Contractor prior to any construction work commencing in the vicinity of the watermains.

Under no circumstances will heavy road-making equipment, other heavy plant or vibratory compaction equipment be permitted to operate within 800 mm vertically or horizontally of the existing mains or connections. The permissible compaction plant within this restricted area shall be the equivalent of a "Bomag 90" under static compaction, or similar approved plant. When the roadworks are far enough advanced to provide a minimum of 800 mm cover to the existing mains, the above restriction will fall away.

The Contractor is to take cognisance of the above requirements when entering rates in the Bill of Quantities and in the programming of the works. No claim for additional payment based on the inability to use plant as a result of the requirements of this clause will be accepted. The Contractor will be held liable for any costs should the watermain or electrical cables be damaged during construction of the road.

**PS.4 SEWERS**

Where there are existing sewers, the Contractor shall exercise due diligence to check their condition before connecting. The Contractor shall ensure high standards of hygiene and regard for public health.

**PS.4.1 Blockage of Foul Water Sewers**

The Contractor shall be responsible for ensuring that cementitious sludge, sand and rubble from the works do not enter the foul water reticulation system. The Contractor shall be liable for any costs incurred by the Council or others as a result of blockages in the reticulation system attributed to failure to comply with the above requirement.

**PS.5 STORMWATER****PS.5.1 Blockage Stormwater Sewers**

The Contractor shall be responsible for ensuring that cementitious sludge, sand and rubble from the works do not enter the stormwater reticulation system. The Contractor shall be liable for any costs incurred by the Council or others as a result of blockages in the reticulation system attributed to failure to comply with the above requirement.

**PS.6 ELECTRICAL PLANT****PS.6.1 General**

Various types of electrical cables including high voltage, low voltage, street lighting and domestic connection cables are affected by the contract. The laying, relocation and jointing of all cables will be carried out by eThekwini Electricity's work gangs, or agents appointed by them, whilst the excavation and backfilling forms part of this contract. Close liaison will therefore be necessary with eThekwini Electricity throughout the contract.

**PS.6.2 Street Lighting**

The existing lighting will be removed in stages and replaced in the centre median / intersection corners. Relocation will take place during this contract and be executed by eThekwini Electricity or their agents. It is a requirement that the street lighting be operational at all times.

**PS.6.3 MV / LV Cables**

Certain MV / LV cables are to be protected within the contract area (see drg 59092 A0). The actual cable work associated with this relocation and / or replacement of these cables will be carried out by eThekwini Electricity and it is stressed that the two week period referred to in Clause PS.2 is the minimum period required to enable eThekwini Electricity to be on site timeously.

**PS.6.4 Relocation of Existing Services**

Should it be necessary to adjust the line, level and / or position of any service not catered for in the contract to enable the construction to proceed the Contractor shall on no account effect such adjustment himself but shall notify the Engineer who will arrange for the work to be carried out at no cost to the Contractor.

**PS.7 TELKOM S.A. LIMITED / NEOTEL PLANT**

Various types of telecommunications infrastructure are likely to exist throughout the project area. Both service providers have been contacted in an effort to determine the location of services and the construction drawings will reflect the information at hand. It must be noted that there may be telecommunications infrastructure within the project area that are not reflected on the drawings and it is the Contractor's responsibility to prove and protect all services throughout the contract.

**PS.8 CCTV PLANT**

No work to CCTV Plant is envisaged, but the tenderers attention is drawn to the fact that CCTV cables and fibre optic cables are existing in the contract area.

**PS.9 MANAGEMENT OF THE ENVIRONMENT**

The Contractor shall pay special attention to the following:

**PS.9.1 Natural Vegetation**

The Contractor shall confine his operation to as small an area of the site as may be practical for the purpose of constructing the works.

Only those trees and shrubs directly affected by the works and such others as the Employer's Agent may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

**PS.9.2 Fires**

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

**PS.9.3 Environmental Management Plan**

In addition to the above, all requirements according to the Environmental Management Plan as detailed in C3.4: Particular Specifications, will be adhered to.

**PS.10 OCCUPATIONAL HEALTH AND SAFETY****PS.10.1 General Statement**

When considering the safety on site the Contractor's attention is drawn to the following:

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the

provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of Section 37(2) of the Occupational Health and Safety Act.

## **PS.10.2 Health and Safety Specifications and Plans to be submitted at tender stage**

### **PS.10.2.1 Employer's Health and Safety Specification**

The Employer's Health and Safety Specification is included in Part C3.4: Particular Specifications.

### **PS.10.2.2 Tenderer's Health and Safety Plan**

At tender stage only a brief overview of the tenderers perception on the safety requirements for this contract will be adequate. This will be attached to Part T2.2: Contractor's Health and Safety Plan.

Only the successful Tenderer shall submit a separate Health and Safety Plan as required in terms of Regulation 7 of the Occupational Health and Safety Act 1993 Construction Regulations 2014, and referred to in Part T2.2: Contractor's Health and Safety Plan.

The detailed safety plan will take into consideration the site specific risks as mentioned under PS.10.1 and must cover at least the following:

- (i) A proper risk assessment of the works, risk items, work methods and procedures in terms of Regulations 9 to 29;
- (ii) Pro-active identification of potential hazards and unsafe working conditions;
- (iii) Provision of a safe working environment and equipment;
- (iv) Statements of methods to ensure the health and safety of subcontractors, employees and visitors to the site, including safety training in hazards and risk areas (*Regulation 7*);
- (v) Monitoring health and safety on the site of works on a regular basis, and keeping of records and registers as provided for in the Construction Regulations;
- (vi) Details of the Construction Supervisor, the Construction Safety Officers and other competent persons he intends to appoint for the construction works in terms of Regulation 8 and other applicable regulations; and
- (vii) Details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014.

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

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

A generic plan will not be acceptable.

**PS.10.3 Cost of compliance with the OHS Construction Regulations**

The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract. Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

Items that may qualify for remuneration will be specified in the Employer's Health and Safety Specification.

**PS.11 SITE SECURITY**

The Contractor shall, for the duration of the contract, provide sufficient security and watchmen to adequately ensure the safety and protection of the works, the Contractor's staff, including local labour and subcontractors, and all site plant and construction equipment required for the works.

Site Security, in conjunction with the SAPS (where necessary), shall be responsible for removal of disruptive elements, that may interrupt the progress of the contract through acts such as, but not limited to, intimidation, threats of disruption, violent disruption, or criminal and illegal activity by the local community or independent organisations or entities that may result in slowing down or partial or total stoppage of the works.

Payment for this item shall be made under Section 1, Part AB of the Bill of Quantities.

**PS.12 DRAWINGS AND SPECIFICATIONS TO BE PROVIDED**

Any information in the possession of the Contractor which is necessary for the Engineer's

Representative to complete the "as-built" drawings must be submitted to the Engineer's Representative before a certificate of completion will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Engineer. The Engineer will supply any figured dimensions, which may have been omitted from the drawings.

The Contractor shall be entitled to receive free of charge, the following:-

- (a) THREE (3) paper copies of each drawing; and
- (b) ONE (1) paper copy of the signed Contract Document.

**PS.13 Survey****PS.13.1 Survey for, and Preparation of, "As Built" Drawings**

The Contractor shall submit the following "As Built" data to the Engineer to complete the required "As Built" Drawings before a Certificate of Completion will be issued:-

Sewer Infrastructure:

- Co-ordinates, invert and cover levels of all manholes modified or constructed as new, during the contract,
- All details relating to pipe bridges and elevated pipelines including co-ordinates and levels of all pipeline and structural infrastructure.
- Co-ordinates of all other services e.g. cable duct markers, valve covers, Telkom manholes etc. that have been either modified or constructed as new, during the contract.

General:

- Notwithstanding the above, the Contractor is to supply to the Engineer all other information necessary, to clearly indicate changes/modifications to the construction drawings during the contract period that will be required by the Engineer so that they can produce the “As Built” drawings.
- Each surveyed point shall be suitably coded and identifiable by the Engineer and shall be supplied on a CD/DVD, in an Ascii file with the following format:-
- Code[SPACE]XCo-ordinate[SPACE]YCoordinate[SPACE]Level[SPACE]Description
- The above information is to be given to an accuracy of three decimal places and is to be surveyed by a suitably qualified person.

In addition to the above, all ‘as built’ information must be provided as a drawing in Autocad and DXF format together with a hard (paper) copy format showing the modifications undertaken during the contract period. Suitable checks on the accuracy of the information provided may be carried out by

the Engineer and should any of the information provided be found to be inaccurate or untrue, the Employer reserves the right to withhold payment or to employ the services of an engineering surveyor to re-survey all the works listed above, at the Contractor’s expense. The Employer shall request a minimum of three quotations from three independent engineering surveyors of his choice, and the lowest quotation will be appointed and the cost thereof will be deducted from monies owing to the Contractor.

The ‘as built’ data shall be the responsibility of the Contractor and shall be paid for under the relevant item in the Bill of Quantities.

The Contractor must also forward to the Engineer, a materials “as built” spreadsheet in a format that is acceptable by the Employer.

The unit of measurement shall be (sum) and the rate shall include for all components outlined in this specification.

The completion certificate shall not be issued unless the above information in totality, has been forwarded to the Engineer.

### **PS.13.2 Setting Out of Works**

The setting out of the works shall be the responsibility of the Contractor and shall be paid for under the relevant item in the Contractor’s Preliminary and General Costs. Any specific requirements pertaining to setting out and tolerances are noted in the relevant Standard Engineering Specifications.

The unit of measurement shall be metre (m) and the rate shall include for the following:

The Contractor shall do the setting out to and beyond the obstructions. Such obstructions shall be reported to the Engineer as soon as possible. No additional payment shall be made for listing and reporting these

obstructions and the re-establishment to set out areas that were affected by the obstructions.

### **PS.13.3 Additional Site Survey**

The Engineer may instruct the contractor to conduct a survey during the course of the contract in order to facilitate re-design due to immovable obstructions. The contractor will be required to submit all survey files in an Ascii format and drawings in a DXF/DWG format.

The unit of measurement shall be metre (m) and the rate shall include for the survey as directed by the Engineer and the submission of all hardcopy and electronic files required by the Engineer.

### **PS.14 CONTRACTOR'S PLANT**

The Engineer shall have the right to order the immediate removal from the site of any plant which he may deem to be unsatisfactory for the proper execution of the work. The Contractor shall obtain without delay satisfactory plant to replace that removed. Any costs arising out of the removal and subsequent replacement of plant shall be to the Contractor's account.

### **PS.15 BARRICADING OF EXCAVATIONS**

All excavations in road reserves and in any other areas in close proximity to pedestrian and vehicular traffic are to be barricaded to the satisfaction of the Engineer. All costs arising from these requirements are to be included in the tendered rates.

### **PS.16 LENGTH OF TRENCHES**

No trenches may be left open over the Builder's Holidays. The cost of backfilling any trenches before the shut down and re-opening thereof after the shut down period shall be for the Contractor's account. Unless otherwise permitted in writing by the Engineer, no more than 200m of trench shall be opened in advance of pipe laying operations.

### **PS.17 WORK IN A RESTRICTED / CONFINED AREA**

Due to the presence of structures and certain underground and overhead services which exist on the site, the Contractor may experience difficulty in working in a confined or restricted space. Tenderers are to take cognisance of this fact and allow for the difficulty of working in a restricted space in the rates. No additional payment will be made for this requirement.

### **PS.18 FINISHING / TIDYING AND SITE MAINTENANCE**

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

Progressive and systematic finishing and tidying will form an essential part of this Contract. On no account must spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate in such a manner as to unnecessarily impede the activities of others, and in the event of this occurring, the Employer shall have the right to withhold payment for as long as may be necessary in respect of the relevant works in the area(s) concerned without thereby prejudicing the rights of others to institute claims against the Contractor on the

ground of unnecessary obstruction.

Finishing and tidying must not be deferred to the end of the contract. The works will not be certified as practically complete until the whole of the works, including all finishing and tidying, has been fully completed to the satisfaction of the Engineer.

**PS.19 SPOIL MATERIAL**

No indiscriminate spoiling of material will be allowed. All surplus or unsuitable material shall be spoiled in designated areas as directed by the Engineer or ECO, unless otherwise specified in the Project Specifications.

**PS.20 CONNECTION TO EXISTING MANHOLES**

The existing walls, pipework (including traps), channel and benching are to be broken out. The new sewer pipe shall be built in at the correct line and level, the channel and benching re-constructed and the manhole walls repaired, all as directed by the Engineer.

The rate is to include for the supply of labour, equipment and materials required for the breaking of the manhole wall and pipework, any modification to the benching of the existing manhole, setting the new pipe to the correct level, making good the manhole wall and the disposal of all unsuitable or surplus material.

The Engineer will prescribe the preferred connection methodology and any modifications required for specific manholes prior to construction.

**PS.21 PERFORMANCE MONITORING OF SERVICE PROVIDERS**

The performance of service providers that have been selected to provide municipal services is required, by Section 116 of the Municipal Finance Management Act, to be monitored and reported on (see Cl.53 of the SCM Policy).

Performance monitoring will be in line with the SMART principle as laid out in Ethekwini Municipality’s Organisational Performance Framework (Specific, Measurable, Achievable, Realistic and Time-framed). The performance of contractors will be summarized in reports on a monthly basis via Performance Assessment Reports.

The table below indicates the provisional KPIs that will be applicable to this contract and **an example** of how the scoring will be applied. The criteria will be reviewed and finalised prior to the commencement of construction. The Engineer will discuss the applicable KPIs with the contractor and this will be minuted.

Any changes to the performance criteria thereafter must be agreed to by the Municipality and Service Provider and such changes must be signed by both parties and attached to the contract document.

| KPI |  | Scoring (%) |           |
|-----|--|-------------|-----------|
| No. | Description  | Month 1     | Month “n” |
| 1   | Progress of Construction Works is consistent with approved Construction Programme. | 95%         | 88%       |
| 2   | Works are being carried out to specification.                                      | 75%         | 60%       |
| 3   | Health and Safety Standards are being monitored adequately.                        | 95%         | 85%       |
| 4   | Health and Safety Standards are being maintained.                                  | 85%         | 75%       |
| 5   | Conformance to Instructions issued.  | 65%         | 90%       |

|                             |   |     |     |
|-----------------------------|---|-----|-----|
| 6                           | Addressing of Labourer concerns.            | 80% | 75% |
| 7                           | Breach of Site Security.                    | 95% | 83% |
| 8                           | Compliance with Environmental Requirements. | 91% | 82% |
| Legend                      |   |     |     |
| KPI Score in excess of 90%  |   |     |     |
| KPI Score between 80% - 90% |   |     |     |
| KPI Score below 80%         |   |     |     |

KPIs will be regularly evaluated and scored by the Employer and Engineer. Necessary measures will be taken should the scoring be consistently low.

**PS.22 WORKING HOURS**

The Contractor is referred to the requirements of Clause 5.8 of the General Conditions of Contract. Work shall only be carried out within the normal working hours as defined in that clause (i.e. 07h00 to 17h00 on Monday to Fridays). No work shall be permitted to be carried out on any weekends or public holidays, which shall include public holidays not considered as paid holidays for the Civil Engineering Industry unless authorised by the Engineer.

**PS.23 MAINTENANCE PERIOD**

The period of maintenance shall be 12 months and shall be calculated from the date of completion of the works as certified by the Engineer. It is noted that only one date shall be certified for the completion of the works.

Once the works have been handed over to the eThekweni Municipality, any repairs to the works deemed necessary will generally be undertaken by the Municipality. Should such repairs be found to be the result of poor workmanship by the Contractor, then the cost of the repairs will be invoiced to the Contractor.

**PS.24 PROJECT PHOTOGRAPHS**

The unit of measurement shall be sum and the rate shall include for the provision of high quality photographs (printed and copied onto a DVD) and must accurately reflect the works being undertaken within each private property, road reserves and within the sensitive areas. It is imperative that photographs are also taken prior to construction in any property or section of works. The photographs shall be provided with payment claims on a monthly basis and each photograph is to be labelled and described for ease of reference.

**PS.25 GRASSING AND FINISHING OF TRENCHES**

This specification details the required methodology for reinstatement of trench surfaces. Individual items have been included in the Bill of Quantities for the various components highlighted.

Grass sods are to be carefully uplifted after consultation with the ECO and maintained away from the trench excavation. Using spades or a grass kicker, sods are to be removed over the width of the trench (1m wide strip), in neat sections, complete with roots, and placed clear of excavation in preparation for replanting after trench has been backfilled. Sods are to be watered regularly whilst being stockpiled to prevent them from drying out.

Following the backfill process, areas to be grassed by sodding shall be given a layer of topsoil of 100 mm in thickness unless the Engineer and ECO orders the topsoil to be reduced or omitted. The areas to be sodded

shall be thoroughly watered beforehand so that it will be moist to a depth of at least 150 mm during sodding. The surface shall be roughened slightly to ensure a good penetration of roots into the soil. Sods shall be protected against drying out and kept moist from the time of harvesting until they are finally placed. The handling of the sods shall not result in the sods losing their prescribed soil thickness.

The first row of sods shall, where possible, be laid in a straight line, and if on a slope, laying the sods shall start at the bottom of the slope. The sods shall be butted tightly against each other, and care shall be taken not to stretch or overlap the sods. Where a good fit cannot be obtained, any intervening spaces shall be filled with topsoil. The next row shall be similarly placed tightly against the bottom row with staggered joints, and so on until the entire area has been covered with sods. Sods shall be laid in such a way that unnecessary trampling over areas previously laid is prevented. To this end, a diagonal method of laying sods is preferred, moving up the slope and behind previously laid sods. On steep slopes and batters the sods shall be held in position by a sufficient number of wooden stakes approximately 300 mm long by 20 mm in thickness and these stakes shall be knocked in to a depth of 100 mm into the subsoil.

Sods laid adjacent to concrete side drains and concrete kerbs shall be laid in such a manner that the sodding will be 20 mm higher than the concrete. When strip sodding is required, the sods shall be laid in such a manner that the sods are proud of the surrounding ground level.

As sodding is completed, each section shall be lightly rolled or firmly pressed to ensure a proper bond with the underlying material, and thoroughly watered afterwards.

In areas where grass sods cannot be uplifted due to a lack of even growth or erosion, a strip shall be cleared and grubbed. Finishing in this instance shall consist of laying *Cynodon Dactylon* instant lawn (1m wide strip) on the topsoil layer treated with fertilizer. Instant lawn is to be used only where directed by the Engineer and shall be supplied and laid as per the requirements of the supplier with reference to this clause.

Maintenance of all grassed areas - Maintenance shall include watering, weeding, mowing, re-fertilisation where necessary, re-grassing of areas that, in the opinion of the Engineer, are unsatisfactory, and any other work that is necessary to achieve full, healthy and weed-free grass cover to banks, reinstated trenches etc. until the end of the defects liability period.

Mowing shall be undertaken with an approved power mower. All established grass cover shall be cut to a height of 25 mm above ground level. Mowing shall be undertaken initially with the mower set to cut 50 mm above ground level, the height of cut being reduced to 25 mm when adequate cover has been achieved.”

## **PS.26 PIPE JACKING**

### **PS.26.1 SCOPE**

This specification covers the requirements for the installation of reinforced concrete pipes not exceeding 2 500 mm internal diameter by a jacking procedure.

### **PS.26.2 INTERPRETATIONS**

For the purposes of this specification the following definitions shall apply:

**Jacking** - the action of pushing a pipeline into position, normally by hydraulic means;

**Jacking pit** - an excavated shaft at the commencement point of a jacked section of a pipeline, in which the jacking structure and other equipment are installed and from which the jacking operations are carried out;

**Reception pit** - an excavated shaft that is located at the end of a jacked section of a pipeline and from which

the shield is recovered;

**Intermediate pit** - an excavated shaft combining a reception and jacking pit often at a change of direction;

**Intermediate jacking point** - a transverse joint in the pipeline from which jacking is performed requiring intermediate jacking pipes;

**Lead pipe** - a pipe that has a rebated end over which the trailing end of the shield is fitted and that is intended to be the first pipe to be used in the jacking process;

**Bearing ring** - a steel plate that is placed against the end of the concrete pipe against which the jack operates and that is intended to ensure that the jacking forces are spread over the end face of the pipe; and

**Shield** - a device that is located at the leading end of the jacking structure and is intended to provide protection for workmen at the leading end, and to prevent collapse of the face of the tunnel excavation.

### **PS.26.3 MATERIALS**

#### **PS.26.3.1 Pipes for Jacking**

Pipes for jacking shall be of reinforced concrete, manufactured in accordance with S.A.B.S. 677 : Concrete non-pressure pipes as published in General Notice 463 dated 9 July 1982 to the internal diameter stated. The design of the pipes shall be determined by the Contractor to suit the proposed method of construction but shall not be less than the class of pipe or type of pipe stated on the drawings or determined by the Engineer.

The pipes shall incorporate extended Ogee type joints which shall be seated by means of a rubber ring. At least one hole shall be formed in the crown of each pipe to allow for the injection of both a lubricant, if required, and a final grout.

#### **PS.26.3.2 Intermediate Jacking Pipes**

In circumstances where it is desirable to use jacking pipes intermediate between manhole or junctions the number and type of such intermediate jacking pipes is to be determined by the Contractor. The joint between pairs of intermediate jacking pipes shall be protected externally by a cylindrical mild steel sleeve of wall thickness at least 8 mm, which shall overlap the pipes on either side of the joint for a distance of at least 150 mm. The joint is to allow a substantial and permanent caulked seal within the joint.

Full details of the intermediate jacking pipes, sleeve and joint sealer are to be submitted with the tender.

### **PS.26.4 CONSTRUCTION**

#### **PS.26.4.1 Jacking Pits**

Jacking pits will in general only be permitted at positions indicated on the drawings or where manholes or junctions are required. Jacking pits shall be of sufficient size to accommodate the jacking operation and any manhole structure to be constructed upon completion of the jacking. The approximate dimensions of the pits shall be agreed with the Engineer before work commences. The Contractor will be required to design and construct all thrust blocks, bases and other temporary works required and shall demolish and remove these upon completion of the works. The size of the jacking pit may be limited because of existing structures and/or services and the Contractor shall take into account all such limiting factors when preparing his tender.

#### **PS.26.4.2 Intermediate Jacking Pits**

In circumstances where it is desirable to use jacking pits intermediate between manholes or junctions indicated on the drawings, the number and type of such intermediate jacking pits is to be determined by the Contractor. Such intermediate jacking pits will only be permitted where conditions of access and working space permit.

Full details of the intermediate jacking pits and the junction box constructed as a closure between the ends of the jacked pipes are to be submitted with the tender.

#### **PS.26.4.3 Pipe Jacking**

The pipes are to be advanced using hydraulic jacks of adequate number and capacity which shall bear against a suitable bearing ring so that the point load of the jacks is distributed adequately over the end face of the pipe. Each jack shall be fitted with a pressure gauge suitably calibrated such that the actual jacking forces can be read at any time.

Suitable packing of hard material shall be inserted between the abutting vertical ends of the pipes in order to transfer the jacking force. The packing shall constitute a complete circle and be sufficiently wide to transfer the load. A suitable adjustable shield is to be fitted to the front of the lead pipe. The shield is to incorporate cutting edges which can be varied by control jacks to maintain the pipe on line and level.

Pipe jacking may generally be carried out either upgrade or downgrade to suit the Contractor's requirements subject to the approval of the Engineer.

#### **PS.26.4.4 Excavation**

As the pipe is advanced, excavation is to take place within the lead pipe under the full-time supervision of a responsible foreman to ensure that the end of the shield is always fully plugged with earth at a safe angle of repose within the pipe. The Contractor shall ensure that there is no uncontrolled flow of sand, mud or earth into the pipe which could result in imperilling excavation personnel or the formation of cavities above or around the sleeve pipe. If any stage during the jacking operation such conditions arise the Contractor shall immediately plug the pipe and stabilize the material before proceeding with further work. Should it be necessary, the Contractor shall allow for stabilizing the soil by dewatering, chemical grouting or any other approved means, details of which are to be submitted with the tender if called for in the Project Specification: Part "AA". The design of the shield shall be such as to permit the face to be completely or partially closed by boarding or similar to control material flow from the face.

Any subsidence occurring above the jacked pipe arising from any cause related to jacking operations shall be made good to the satisfaction of the Engineer at the Contractor's expense. The Contractor shall bear full responsibility for any consequential damage to persons and property resulting from subsidence.

#### **PS.26.4.5 Lubrication**

To ease pipe friction, the Contractor shall make provision for the injection of bentonite or other approved lubricant at the cutting shield and through the holes in the pipes to ease friction.

#### **PS.26.4.6 Grouting and Plugging**

When the jacked pipeline is in its final position a stabilized sand/cement grout shall be injected to fill all voids between the jacked pipeline and the surrounding material. The grout shall have a strength equal to or better

than a grout consisting of one-part cement and four parts sand and shall have a slump of 120 mm.

All holes in the pipeline shall be sealed with an approved epoxy sealant.

#### **PS.26.4.7 Disposal of Excavated Material**

All excavated material from jacking pits, reception pits and pipe jacking which is not required for backfilling is to be removed from site and disposed of by the Contractor.

Excavated material is to be removed regularly as the work progresses.

#### **PS.26.4.8 Tolerances**

The position of any point of the finished pipeline shall be within 100 mm horizontally and 50 mm vertically of the designed position. Adjustment to line or level, or both, shall be gradual and the pipe manufacturer's stated maximum permissible draw or angular deflection shall not be exceeded at any point. Misalignment between pipe units shall not exceed 10 mm.

The Contractor shall check line and level at least once during the installation of each pipe length, and he shall take such corrective action as is necessary. A copy of the results of all checks and a statement of any corrective measures taken shall be available for inspection on the site, and a copy shall be given to the Engineer as soon as the jacking has been completed.

Should the difference between the actual and the specified position or alignment of the finished pipeline exceed the value of the permitted deviation the Contractor shall bear the cost of all additional measures deemed necessary by the Engineer to accommodate the as-built pipeline into the permanent works.

#### **PS.26.4.9 As-Built Drawings**

If an alternative design by the Contractor has been accepted or if the structure shown on the tender drawings has been modified to suit the jacking method, the Contractor shall, on completion of the work and before the final payment is made, supply to the Engineer transparencies showing details of the completed structure. Each such transparency shall be certified by the Contractor to be an accurate reflection of the details of the work as constructed.

### **PS.26.5 MEASUREMENT AND PAYMENT**

#### **PS.26.5.1 Jacking Establishment**

Lump sum items in respect of establishment charges shall be in two parts:

- (a) fixed charges; and
- (b) time-related charges (period to be stated by the Contractor).

The sums for (a) and (b) shall cover respectively the fixed and time-related charges for providing and establishing on site the jacking and reception pits, and any intermediate jacking pits, together with all plant, equipment and materials necessary for the handling and jacking of pipes, all additional excavation, backfill and reinstatement of paved and other surfaces, railway tracks, etc., shoring, bracing, lighting, watching, dewatering and maintaining of all temporary works until the works are completed and the subsequent removal of temporary works and making good.

A maximum payment of 80% of the sum in respect of fixed charges shall become payable when all equipment has been established and jacking of the first pipe has commenced. The remaining 20% shall become payable after the pipe jacking has been completed and the equipment removed from site.

The period of payment of time related charges shall be that stated by the Contractor. No further payments of time related charges shall be made unless the Engineer shall have issued a variation order for an increased period. Should the approved programme indicate that the period stated by the Contractor in the tender document is incorrect then the period stated shall be amended to suit and the unit rate obtained by dividing the sum tendered by the new period.

#### **PS.26.5.2 Supply of Pipes**

The unit of measurement for supply of pipes to be jacked shall be the metre of pipe and will be measured between ends of the completed pipeline. The measurement shall be continuous through intermediate jacking pits and will include intermediate jacking pipes.

The rate shall cover the cost of supplying selected pipes with grouting holes, delivering, handling, storing of pipes, rubber rings, packing pieces, and flexible sealing to joints between intermediate jacking pipes.

#### **PS.26.5.3 Jacking of Pipes**

The unit of measurement for jacking of pipes shall be the metre of pipe and will be measured between ends of the completed pipeline.

The rate shall cover the cost of the handling and positioning of the pipes, the jacks, and subsidiary materials, the labour necessary for jacking the pipes in any class of material, grouting of voids and sealing grouting holes in the pipe barrels, bentonite injection (if necessary), intermediate jacking pipes and ancillary jacking equipment or the construction of junction boxes as closures between pipe ends where intermediate jacking pits are used.

The construction of junction boxes at intermediate jacking stations will not be measured and paid for separately unless they are specifically ordered by the Engineer or shown on the drawings for branch connections.

#### **PS.26.5.4 Excavation for Jacking**

The unit of measurement of excavation shall be the metre of pipe installed and will be measured between the ends of the completed pipeline.

The rate shall cover the cost of digging at the face in any class of material, for all measures necessary for stabilizing the soil by dewatering, chemical grouting or any other approved means, transporting excavated materials through the pipe, lifting to ground level, loading and disposal of all surplus, and ventilating and lighting within the pipe.

**C3.3: STANDARD SPECIFICATIONS**

**C3.3.1** The Specifications on which this contract is based are the eThekiwini Municipality's (City of Durban) Standard Engineering Specifications (hereafter referred to as the Standard Engineering Specifications). This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections.

| <b>Part</b> | <b>Description</b>                       | <b>Date of Issue</b> |      |
|-------------|--|----------------------|------|
| AB          | General Specifications                   | July                 | 1992 |
| B           | Site Clearance                           | March                | 1990 |
| C           | Concrete Work                            | February             | 1987 |
| DA          | Earthworks: Bulk                         | January              | 1985 |
| DB          | Earthworks for Pipe Trenches             | July                 | 1992 |
| DC          | Earthworks for Concrete Lined Canals     |                      |      |
| DD          | Earthworks for Structures                |                      |      |
| EA          | Lime Stabilisation                       |                      |      |
| EB          | Graded Crushed Stone                     | December             | 1988 |
| EC          | Cement Treated Graded Crushed Stone      | December             | 1988 |
| ED          | Road Asphalt                             | July                 | 1992 |
| EE          | Pre-coated Stone Chippings               |                      |      |
| EF          | Kerbs and Haunches                       | July                 | 1992 |
| EG          | Sidewalks, Footpaths and Median Areas    | July                 | 1992 |
| EH          | Steel Guardrails & Conc. Median Barriers |                      |      |
| EJ          | Concrete Interlocking Block Surfaces     |                      |      |
| EK          | Waterbound Macadam Base                  |                      |      |
| EL          | Dumprock Subgrade Improvement            |                      |      |
| EM          | Concrete Surface to Roads                |                      |      |
| EN          | Slurry Sealing                           |                      |      |
| EP          | Single Seal Surface Treatment            |                      |      |
| F           | Protection Works                         | July                 | 1992 |
| G           | Pre-stressing                            |                      |      |
| H           | Reinforced Earth                         |                      |      |
| J           | Piling                                   |                      |      |
| K           | Bearings                                 |                      |      |
| L           | Structural Work                          |                      |      |
| PB          | Pavement Layers of Gravel Material       |                      |      |
| PC          | Stabilisation of Gravel Base             |                      |      |
| PD          | Surface Treatment: Modified Binder       |                      |      |
| PE          | Pressure Pipelines: Steel                |                      |      |
| PF          | Pressure Pipelines: Other Than Steel     |                      |      |
| PJ          | Pipe Jacking                             |                      |      |
| PG          | Lateral Support Systems                  |                      |      |
| S           | Reinstatement                            | March                | 1993 |
| TA          | Road Signs                               | October              | 1989 |
| TB          | Road Markings                            | October              | 1989 |

### C3.3.2 AMENDMENTS TO THE STANDARD SPECIFICATIONS

#### INTRODUCTION

In certain clauses the standard, standardized and particular specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternative or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains additional specifications required for this particular contract.

The number of each clause and each payment item in this part of the project specifications consists of the prefix PS followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new clause or payment item, which does not form part of a clause or a payment item in the standard specifications and which is included here, is also prefixed by PS, but followed by a new number which follows on the last clause or item number used in the relevant section of the standard specifications.

|       |  |
|-------|--|
| PS AB | General Specifications                   |
| PS B  | Site Clearance                           |
| PS C  | Concrete Work                            |
| PS DA | Earthworks: Bulk                         |
| PS DB | Earthworks for Pipe Trenches             |
| PS DC | Earthworks for Concrete Lined Canals     |
| PS DD | Earthworks for Structures                |
| PS EA | Lime Stabilisation                       |
| PS EB | Graded Crushed Stone                     |
| PS EC | Cement Treated Graded Crushed Stone      |
| PS ED | Road Asphalt                             |
| PS EE | Pre-coated Stone Chippings               |
| PS EF | Kerbs and Haunches                       |
| PS EG | Sidewalks, Footpaths and Median Areas    |
| PS EH | Steel Guardrails & Conc. Median Barriers |
| PS EJ | Concrete Interlocking Block Surfaces     |
| PS EK | Waterbound Macadam Base                  |
| PS EL | Dumprock Subgrade Improvement            |
| PS EM | Concrete Surface to Roads                |
| PS EN | Slurry Sealing                           |
| PS EP | Single Seal Surface Treatment            |
| PS F  | Protection Works                         |
| PS G  | Pre-stressing                            |
| PS H  | Reinforced Earth                         |
| PS J  | Piling                                   |
| PS K  | Bearings                                 |
| PS L  | Structural Work                          |
| PS PB | Pavement Layers of Gravel Material       |

|       |   |
|-------|---|
| PS PC | Stabilisation of Gravel Base            |
| PS PD | Surface Treatment: Modified Binder      |
| PS PE | Pressure Pipelines: Steel               |
| PS PF | Pressure Pipelines: other than Steel    |
| PS PG | Non Pressure Pipelines and Pc Culverts  |
| PS PH | Manholes and Appurtenant Drainage Works |
| PS PJ | Pipe Jacking                            |
| PS PG | Lateral Support Systems                 |
| PS PS | Pump Stations: Sewage                   |
| PS S  | Reinstatement                           |
| PS TA | Road Signs                              |
| PS TB | Road Markings                           |

## **PSA GENERAL (SANS 1200 A)**

### **PSA-2 INTERPRETATIONS**

#### **PSA-2.3 Definitions**

##### **(a) General**

Add the following definitions:

**General Conditions:** The General Conditions of Contract specified for use with this Contract and the Special Conditions of Contract.

**Specified:** As specified in the Standardized Specifications, the Drawings or Project Specifications. Specifications shall have the corresponding meaning, as provided for in Sub-sub-Clause 1(1)(u) of the General Conditions of Contract.

##### **(c) Measurement and Payment:**

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

**“Fixed charge:** A charge that is not subject to adjustment on account of variation in value of the Contract Amount or the Contract Time of Completion.

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

**“Value-related charge:** A charge, the amount of which is varied pro rata to the final value of the measured work executed and valued, in accordance with the provisions of the contract.

### **PSA-3 MATERIALS**

Add the following sub-clause:

#### **PSA-3.3 Ordering of Materials**

The quantities set out in the Schedule of Quantities have been determined from calculations based on data available at the time and should therefore be considered to be approximate quantities only. The liability shall rest entirely and solely with the Contractor to determine before

ordering, the required types and quantities of the various materials required for the completion of the works in accordance with the Specifications and Drawings issued to the Contractor for construction purposes.

Any reliance placed by the Contractor on the estimated quantities stated in the Schedule of Quantities issued for tendering purposes, or measurements made by the Contractor from Drawings issued for tendering purposes only, shall be entirely at the Contractor's risk and the Employer accepts no liability whatever in respect of materials ordered by the Contractor for construction purposes.

## **PSA-4 PLANT**

### **PSA-4.2 Contractor's Offices, Stores and Services**

Add the following to this clause;

"The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. The camp shall be kept neat and clean at all times and all surplus or rejected material shall be removed from the site.

No personnel will be allowed to reside on the Site. The Contractor shall be responsible for the security of his construction camp and of the construction Site, at his own cost. Only night-watchmen may be on the Site after hours.

#### **PSA-4.2.1 Site Diary**

A site diary, in triplicate format, which will be supplied by the Contractor, must be filled in on a daily basis and submitted to the Engineer on a weekly basis. No claims will be considered without the site diary's schedules properly completed (on a daily basis) and submitted."

## **PSA-5 CONSTRUCTION**

### **PSA-5.1 Survey**

#### **PSA-5.1.1 Setting out of the Works**

Add the following to this clause;

"The Contractor shall check all reference pegs, bench marks and line pegs well before he intends constructing any portion of the Works. Should any peg have been disturbed or any discrepancy in the positions or levels be discovered, the Engineer shall be informed as soon as possible in writing, but in any event at least 7 days before such construction is due to start. If no written statement is received from the Contractor it will be held that the Contractor has satisfied himself that the positions and levels of the reference pegs and bench marks are correct."

#### **PSA-5.1.2 Preservations and Replacement of Beacons and Pegs Subject to the Land Survey Act**

Delete the first sentence in the 2<sup>nd</sup> paragraph, "Before the commencement of construction.....compile a list of such pegs that are apparently in their correct positions.", and replace with the following;

"Before commencing work on the site the Contractor shall locate and mark all survey beacons within and on the perimeter of the site. The marking shall consist of a cairn of stones painted white and iron standard to the approval of the Engineer protruding at least one metre above the ground. Should any beacon be found to be missing or disturbed during the initial search, the Engineer

must be informed in writing immediately. The Engineer will immediately arrange for the beacon to be re-established by a registered Land Surveyor at no expense to the Contractor. Should any beacon be disturbed or destroyed during the contract for whatever reason, it will be replaced by a registered Land Surveyor at the Contractor's expense. Allowance must be made by the Contractor for beacons which may be unavoidably disturbed during the contract.”

#### **PSA-5.2 Watching, Barricading, Lighting and Traffic Crossings**

Add the following to this clause;

##### Temporary Traffic Signs

The Contractor shall provide, erect and maintain on the site and at such positions on the approaches to the site all traffic signs necessary for the direction and control of traffic.

The details of all such signs, which shall conform to the current Road Traffic Ordinance and the departmental publication entitled “Safety in Road Construction”, must be approved by the Engineer before erection.

The signs shall be reflectorised or adequately illuminated at night in a manner approved by the Engineer and kept clean and legible at all times. The Contractor shall reposition, cover or remove signs as required during the progress of the works.

#### **PSA-5.4 Protection of Overhead and Underground Services**

Replace with the following:

The Contractor is reminded of his obligations to prove the actual position of all services on site before any work commences in the vicinity of the services. The Contractor is further required to measure accurately the chainage and level at which these services occur and to report this information to the Engineer for comparison with the contract drawings prior to work commencing in the vicinity of the services.

The drawings illustrate the positions of services as accurately as has been possible to ascertain from existing records. However, it is possible that there are services existing which are not reflected on the Contract drawings which might have an effect on the works. Therefore, the Contractor must take cognisance of the above possibility and provide sufficient flexibility within his programme of works to accommodate any alterations that might be necessary.

Should it be necessary to adjust the line, level and / or position of any service not catered for in the contract to enable the construction to proceed, the Contractor shall on no account effect such adjustments, without the prior consent of the Engineer.

Buried electrical and telephone cables shall be exposed using hand tools initially before allowing the uncontrolled use of picks and other implements, or before using machines to excavate. Supporting or diverting cables must be done by, or in consultation with, officials of the Electricity Service Unit, Eskom or Telkom respectively.

When cables are not in the positions shown on the drawings and cannot be found after proving trenches have been put down, assistance may be obtained by calling an official from the appropriate authority during office hours.

Existing services including water mains, sewer pipes, stormwater pipes and drains, electricity and

telephone lines, cables, poles and conduits shall be protected, supported, maintained in service and restored to the condition in which found by the Contractor at his expense, or where necessary by the appropriate authority at the Contractor's expense.

Provided that where it is necessary to relocate such existing services, such relocation shall be arranged by and carried out at the Employer's expense.

#### **PSA-5.8 Ground and Access to Works**

Add the following to this clause;

"Where necessary the contractor will make provision for temporary gates, ramps and roads to obtain access to the site. Where it involves these activities, the Contractor will obtain the necessary approvals from the land owners to do so.

On completion of operations the Contractor shall restore the ground surface, wherever it may have been disturbed, to its original condition by filling in all ruts with material similar to the material within the rut and levelling the ground and, where necessary, planting grass and shrubs as may be required. Any boundary fences which have been removed or damaged by his operations and activities shall be repaired and/or reinstated at the Contractor's expense".

Add the following new Subclause:

#### **PSA-5.9 Accommodation of Traffic**

"Where construction work has to be carried out on or near public roads, the Contractor shall deal with traffic as specified in SANS 1921-2 (2004): Construction and Management Requirements for Works Contracts, Part 2: Accommodation of Traffic on Public Roads occupied by the Contractor.

Add the following new Subclause:

#### **PSA-5.10 Daywork**

Dayworks is to be understood to be work and/or material, the provision of which cannot, in terms of the Contract be measured in the normal items of the Schedule of Quantities and has to be measured in terms of time and cost.

Payment for work on a daywork basis will only be made if :-

- a) It is agreed by the Engineer to be outside the specified scope of a measured item in the Contract.
- b) It is carried out in response to a written instruction by the Engineer.
- c) The records of plant, labour and material are submitted daily for the consideration of the Engineer and duly approved.

The rates tendered in the Daywork Schedule shall be taken to be the full inclusive rates at which the scheduled services are available, including the use of small tools, maintenance and repair of all equipment together with all overheads and profits.

#### **PSA-6 TOLERANCE**

Add the following sub-clause

#### **PSA 6.4 General**

“No guarantee is given that the full specified tolerances will be achievable independently of each other and the Contractor is cautioned in regard to the fact that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the works.

Except where the contrary is specified, or when clearly not applicable, all quantities shall for the purposes of measurement and payment be determined from the “authorised” dimensions. This shall be taken to mean the dimensions as specified or shown on the drawings or, if changed, as finally instructed by the Engineer, without any allowance for the tolerance specified. Save as hereunder specified to the contrary, all measurements for determining quantities for purposes of payment will be based on the “authorised” dimensions.

If the work is therefore constructed in compliance with the “authorised” dimensions plus or minus any tolerances allowed, quantities will be based on the “authorised” dimensions regardless of the actual dimensions to which the work has been constructed.

Where the work is not constructed in accordance with the “authorised” dimensions plus or minus any tolerances allowed, the Engineer may nevertheless, on his sole discretion accept the work for payment. In such cases, no payment shall be made in respect of quantities of work or materials in excess if those calculated from the “authorised” dimensions and where the actual dimensions are less than the “authorised” dimensions minus any tolerance allowed, the quantities for payment shall be based on actual dimensions as constructed.”

## **PSA-8 MEASUREMENT AND PAYMENT**

### **PSA-8.5 Sums stated provisionally by Engineer**

Add the following to this clause;

Provisional Sums have been included in the Bill of Quantities for works that may be undertaken during construction. The Engineer will specify the works package and a rate will be requested from the contractor. The rates offered during construction shall also be inclusive of all tasks associated with the completion of the works. The Engineer and Employer reserves the right to reject rates that are deemed by either/both parties to be unreasonable. The Contractor will then be required to re-price such items until the Engineer and Employer are satisfied.

## **SITE CLEARANCE (SANS 1200 C)**

### **PSC-3 MATERIALS**

#### **PSC-3.1 Disposal of Material**

Add the following to this clause;

Material obtained from clearing must be disposed off site by the Contractor unless otherwise agreed with the ECO. The Contractor will be held responsible for observing by-laws and regulations of the relevant local authority and for any injury to persons and damage to property caused by any fire starting on site, in his camp, or a fire started for any reason by his employees, regardless of whether such injury or damage is the direct or indirect result of such fire. The Contractor shall indemnify the Employer against all claims or damages arising from this source.

Burning of combustible material shall not be allowed.

## **PSC-5 CONSTRUCTION**

### **PSC-5.2.3.2 Individual Trees**

Delete the second sentence of the Sub-Clause and substitute the following:-

Unless advised otherwise in writing, all trees are designated for preservation, and the amount of penalty payable by the Contractor for the removal by him of each and every such tree shall be R 1000.00. This penalty is not withstanding any penalties imposed by the Environmental Authorities for damage to protected trees in terms of the applicable legislation.

### **PSC-5.3 Clearing**

Add the following new Sub-Clause:

#### **PSC-5.3.1 Temporary Fencing**

Where the pipeline route crosses an existing fence, a section of fencing not exceeding 5.0m in length may be removed temporarily during construction and thereafter reinstated to a condition not worse than the original as soon as the pipeline has been installed and backfilled in the immediate vicinity of the crossing. For the period while the existing fence is dismantled, the Contractor shall erect, at the end of each day's operations, a temporary fence to close the gap in the existing fence.

### **PSC-5.6 Conservation of Topsoil**

Add the following to this clause;

All topsoil shall be conserved for later use by stockpiling clear of the working area. The location of stockpile must be agreed upon with the ECO prior to commencement of construction.

## **PSC-8 MEASUREMENT AND PAYMENT**

Add the following new clause;

### **PSC-8.2.11 Existing kerbing**

The unit of measurement shall be metre (m) and the rate shall include for the removal of existing concrete and premix kerbing as well as the removal of the concrete haunching. The rate shall include for the disposal of the removed material in an approved dump site, all equipment, materials and labour required.

Where the existing kerbing is damaged, the Engineer shall provide an instruction to replace this kerbing with new Figure 6 barrier or mountable kerbs. The unit of measurement shall be metre (m) and the rate shall include for the supply and installation of Figure 6 kerbing including the concrete haunch and base as per the standard detail drawing. The rate shall also include for all equipment, materials, labour etc. required to complete the task.

Add the following new clause;

### **PSC-8.2.12 Demolish existing brick/block wall**

The unit of measurement shall be metre (m) and the rate shall include for the removal of existing M190 block walls and FBX Clay Facebrick walls up to a maximum height of 2m. Approximately 0.3m<sup>3</sup> of reinforced concrete will be removed per metre as part of the base. The rate shall include

for the disposal of the removed material in an approved dump site, all equipment, materials and labour required.

Add the following new clause;

#### PSC-8.2.13 Relocate Timber Shed/Wendy Houses

Where agreed with the homeowner, timber sheds/wendy houses of 20m<sup>2</sup> maximum floor area and maximum height of 2.1m will be moved to a new location within the same site to accommodate the construction of the pipeline. The unit of measurement shall be Number (No.) and the rate shall include for the relocation of the shed/wendy house (50m maximum distance), all materials, equipment and plant necessary for the relocation and the protection of the structure during the relocation. The contractor will be liable for any damage to the shed/wendy house and property within the site.

Add the following new clause;

#### PSC-8.2.14 Remove and re-lay existing pavers

The unit of measurement shall be square metre (m<sup>2</sup>) and the rate shall include for the removal of heavy duty concrete pavers (80mm thick – 35Mpa), setting aside, maintaining and re-laying after the construction of the pipeline. The rate shall also include for the supply and spreading of 25mm bedding sand below the paver and jointing sand to be filled between joints after the pavers are laid. All plant, equipment and labour required for the activity is to be included in the rate.

Add the following new clause;

#### PSC-8.2.15 Remove and re-install intercom systems

It is expected that intercom systems will be affected by the proposed pipeline alignment. The unit of measurement shall be Number (No.) and the rate shall include for the removal of the intercom system with the permission of the homeowner, setting aside and maintenance of the entire system and re-installation including all components to the homeowner's satisfaction.

### **PSDB EARTHWORKS (PIPE TRENCHES) (SANS 1200 DB)**

#### **PSDB-3 MATERIALS**

##### **PSDB-3.1 Classes of Excavation**

Add the following to this clause;

For the purpose of measurement and payment excavated material will be classified under two headings:-

##### Soft

This shall be material that can be efficiently removed or loaded, without prior ripping by plant, and without the use of explosives or systematic drilling, wedging or splitting.

##### Hard

This shall be material that cannot be efficiently removed by plant and can only be removed after blasting, and in the case of restricted excavation, using systematic drilling.

The engineer's decision regarding the classification of the excavated material shall be final.

**PSDB-3.5 BACKFILL MATERIALS**

Add the following sub-clauses;

c) The Contractor shall take positive steps to avoid burying or contaminating material which would be suitable for use as backfill as described in a) and b)".

d) Where scheduled in the Schedule of Quantities, or directed by the Engineer, stabilized backfill material shall be stabilized with 4% cement by mass, and the backfill material shall not have a PI exceeding 10."

**PSDB-5 CONSTRUCTION****PSDB-5.1 Precautions**

Add the following new clause;

**PSDB-5.1.2.4 Erosion Protection**

Where pipe trenches are taken down steep slopes, cross embankments (or grips) shall be constructed across the trenches in order to prevent erosion of the back fill covering the pipelines. Cross embankments shall comprise rounded earth mounds extending across the pipeline right of way and orientated so as to have a fall of 1% along their length. They shall be compacted to a density similar to that of undisturbed soil either side of the trench and they shall be at 20m intervals and 2m long, unless otherwise specified.

The height of the cross embankment for a distance of 0,3m on either side of the trench centre line shall be raised 100mm above the remainder of the cross embankment to allow for settlement. In order to form a satisfactory drainage channel upstream of each cross embankment the crown over the trench shall be removed for a distance of 0,5m upstream of the cross embankment.

Where trench slopes exceed 15%, or where the trench is located within the drainage channel alongside a gravel road, the Engineer may order rubble masonry cross walls to be constructed in the trenches at right angles to the longitudinal axis.

A separate item has not been included in the Schedule of Quantities for the construction of cross embankments. The Contractor's price rates shall include for the borrowing of suitable material to form the grips if this is necessary. The embankments will be constructed on written instruction from the Engineer.

Add the following new clause:

**PSDB-5.1.5 Trench Excavations**

"The precautions for excavations as specified in Clause 5.1.1 of SANS 1200 D shall also apply to all trench excavations.

The Contractor shall take all the steps necessary to ensure that no person is required or allowed to work in a trench or any other unsupported overhanging excavation which is more than 1,5 m deep, and any excavation which has not been adequately supported, shored or braced if there is any danger whatsoever of the sides of the excavation collapsing. The support, shoring or bracing to be designed and constructed by the Contractor, shall be strong and sturdy enough to support the sides of the excavation in question. Notwithstanding the contents of this clause, the contents of the Geotechnical investigation report or this tender document in its entirety, the shoring

requirements shall be determined on site after an initial inspection of trenches by the resident engineer and the contractor. Payment will only be made for shoring if this methodology is followed.”

### **PSDB-5.3 Site Clearance**

Add the following to this clause:

“The Contractor shall dispose of all surplus and unsuitable material on a site to be found by him and approved by the Engineer. All costs related to the disposal of surplus material shall be deemed to be included in the tendered rates.

Where pipes are to be laid the Contractor will be allowed to clear and grub a strip 1.0m wide along the centre-line of the trench. No vegetation outside this strip may be damaged without the written approval of the Engineer.

All trees with a girth of 250mm or a height of 2.5m within this strip, shall be protected and may only be trimmed or removed after a written order by the Engineer.”

### **PSDB-5.4 Excavation**

Add the following to this clause:

Excavation for manholes and chambers shall be taken out simultaneously with the trench excavations to the net plan dimensions of the structure. In no case shall the Contractor excavate more than 200 m ahead of the pipe laying gang. The requirements of this clause may be relaxed as far as any road crossing are concerned, at the discretion of the Engineer.

The contractor will be held responsible for all costs arising from the need to place imported fill, stabilized fill or mass concrete in the bottom of the trench excavation as a result of over excavation of the pipe trench.

Where the trench excavation crosses surfaced roads (including concrete and premix surfaced roads), the Contractor shall be responsible for saw-cutting through the existing surfacing on both sides of the centreline of the pipeline, removing the cut surfacing to spoil, and neatly excavating the material between the two grooves. The cost of this work, where not scheduled separately, shall be deemed to be included in the rates for excavation.

### **PSDB-5.5 Trench Bottom**

Delete the following:

“... in the manner directed” and insert “... in areas to be arranged by the Contractor acceptable to the Engineer”.

Add the following:

When the trench bottom is unsuitable due to waterlogged conditions, at the instruction of the Engineer, the Contractor shall excavate and lay a 200mm layer of 19mm crushed stone mat wrapped in geofabric (bidim) with a 760mm overlap.

Where the bottom of the trench has been loosened during excavation, it shall be compacted to 90% Mod AASHTO density prior to pipelaying and bedding. Where the bottom of the trench has been excavated to a depth greater than that specified or ordered, the Contractor shall at his own

expense replace the excess material so removed with fine granular material compacted to 90% Mod AASHTO density or with 10 MPa concrete, as directed by the Engineer.

## **PSDB-5.6 BACKFILLING**

### **PSDB-5.6.1 General**

Add the following to this clause;

After the pipes have been laid, no backfilling shall be undertaken until the pipes have been inspected and approved by the Engineer. The Contractor may use his discretion as to whether to backfill around joints before the pipeline is hydraulically tested and should he decide to backfill the joints he will be responsible for the locating of any leaks and no extra payment will be made for any re-excavation and subsequent reinstatement.

### **PSDB-5.6.2 Materials for Backfilling**

Add the following to this clause;

The Contractor is to indicate to the Engineer if unsuitable material for backfilling is encountered.

Imported material for backfilling shall be obtained from designated areas or commercial sources and paid for as specified in SABS 1200 DB Clause 8.3.3.1 on written instruction from the Engineer."

### **PSDB-5.6.8 Transport for Earthworks for Trenches**

Add the following to this clause;

For this contract all haul will be regarded as free haul and the cost of transportation of all materials will be deemed to be included in the rates and prices tendered in the schedule of quantities. No overhaul will be payable on this contract.

## **PSDB-7 TESTING**

**PSDB-7.1** Notwithstanding the contents of Clause 7.1, the Contractor shall bear the cost of all quality control tests regardless of whether the tests indicate acceptable compaction or not.

The following are the minimum frequencies for the process control tests to be executed by the Contractor at his own expense:

- Pipe bedding: one density test on each of the following layers for every 25m of pipe trench:-
  - a) Above the first 100mm layer
  - b) 100mm above crown level of pipe
  - c) 300mm above crown level of pipe
- Normal trench backfilling: one density test on every 300mm layer for every 25 m of pipe trench.
- Backfilling in areas subject to vehicle loads: one test on each 150mm layer for each road crossing.

The positions of this minimum number of density tests shall be determined randomly by the Contractor and shall be clearly documented with the results. The results of the tests shall be submitted to the Engineer and shall prove to the Engineer that the work as a whole was done

satisfactorily.

The Engineer could order additional tests, over and above the minimum tests. Payment for these tests will be made under Item 3.1 if the tests indicate that the density is as specified. If any tests fail, the cost of such tests shall be for the account of the Contractor.

## **PSDB-8 MEASUREMENT AND PAYMENT**

### **PSDB-8.1 Basic Principles**

Add the following to this clause;

Disposal of surplus and/or unsuitable material will be as specified in PSDB-5.6.3 and PSDB-5.6.4. No additional payment other than the tendered scheduled rates will be made for such disposal of material.

### **PSDB-8.3 Scheduled Items**

#### **PSDB-8.3.3 Excavation Ancillaries**

##### **PSDB-8.3.3.3 Compaction in Road Reserves**

Add the following to this clause;

Compaction in road reserves must be to 93% Mod AASHTO minimum density.

##### **PSDB-8.3.3.4 Overhaul**

Delete this Clause and item as well as all references to restricted free-haul as overhaul is not applicable to this Contract.

#### **PSDB-8.3.4 Particular Items**

##### **PSDB-8.3.4(a) Shore trench opposite structure or service**

Add the following to this clause;

Where trenches are excavated in close proximity to structures, these lengths of trench must be adequately supported to prevent any damage to the structures. The Contractor will be held responsible for any damage to the structures resulting from subsidence of foundations or related causes which may be attributed to his negligence.

It must also be noted that sites with poorly consolidated embankments will require shoring in the trenches.

##### **PSDB-8.3.5 Existing Services that Intersect or Adjoin a Pipe Trench**

Add the following to this clause;

The contractor must allow for all necessary liaison with the relevant authorities and any delay that may be incurred to work resulting therefrom in rates tendered.

### PSDB-8.3.6 Finishing

Add the following new clause;

#### PSDB-8.3.6.2 Saw-Cut and remove asphalt surfacing

The unit of measurement shall be square metre (m<sup>2</sup>) and the rate shall include for saw cutting Asphalt to a maximum thickness of 80mm, breaking up the asphalt and disposing in an approved dump site including all plant, equipment and labour.

#### PSDB-8.3.6.3 Remove concrete surfacing

The unit of measurement shall be square metre (m<sup>2</sup>) and the rate shall include for breaking up of existing reinforced concrete to a maximum thickness of 150mm and disposing in an approved dump site including all plant, equipment and labour.

#### PSDB-8.3.6.4 In situ subgrade

The unit of measurement shall be cubic metre (m<sup>3</sup>) and the rate shall include for ripping of the subgrade and compacting to 93% Mod AASHTO including all plant, equipment and labour. Should the contractor encounter any sub-surface water, expansive soils or any other anomaly, it shall be reported to the Engineer immediately and no subsequent layerworks shall be constructed until the Engineer has issued an instruction.

#### PSDB-8.3.6.5 Importing materials for road/driveway crossings

The unit of measurement shall be cubic metre (m<sup>3</sup>) and the rate shall include for acquiring of the material from a commercial source, payment for any royalties if applicable, loading, hauling, transporting, spreading in order to achieve the specified thickness after compaction, compaction to the specified density and all testing requirements. Where stabilization is required, the rate shall include for the supply of all materials, mixing, spreading and compaction to achieve the required UCS.

#### PSDB-8.3.6.6 Supply of asphalt & related products for crossings

The unit of measurement for asphalt shall be square metre (m<sup>2</sup>) and the rate shall include the supply of asphalt as per the thickness and mix indicated in the Bill of Quantities and the construction of a wearing course for a driveway/road crossing. Prior to the supply of asphalt, the contractor shall supply the target material properties for approval.

The unit of measurement for tack coat shall be litre (l) and the rate shall include the supply and application of tack coat as per the requirements indicated in the Bill of Quantities including all equipment, plant and labour etc.

#### PSDB-8.3.6.7 Supply of concrete and construction of wearing course

The unit of measurement shall be cubic metre (m<sup>3</sup>) and the rate shall include for the supply of concrete as per the grade specified in the Bill of Quantities, compliance with all requirements of SANS 1200 G and the particular specification PSG included in this document.

#### PSDB-8.3.6.8 Concrete Encasement

The unit of measurement shall be metre (m) and the rate shall include for the supply of Grade 20Mpa/19mm concrete and construction of concrete encasement complete as per Drawing 56728

including all materials, equipment, formwork, jointing, finishing etc.

**PSG CONCRETE (STRUCTURAL) (SANS 1200 G)**

**PSG-3 MATERIALS**

**PSG-3.1 Approval of Materials**

Add the following to this clause;

Materials used shall be non-toxic and shall not impart any odour, taste or colour to water in streams or rivers that come into contact with completed structures.

PSG-3.2.1 Cement

Add the following to this clause;

“Unless otherwise agreed to by the Engineer, the cement used shall be Portland Cement complying with SANS 50197-1.”

Add the following new clause:

PSG-3.2.1 (b) Fly Ash Cement Extender

Fly Ash (FA) shall be obtained from only one source and shall be tested and approved in terms of SABS 1491 Part 2.

**PSG-3.2.3 Storage of cement**

Add the following to this clause;

“Notwithstanding the requirements of Sub-clause 3.2.3, cement and other cementitious materials shall not be kept in storage on Site for longer than three months.”

**PSG-3.3 Water**

Add the following to this clause;

The Contractor shall ensure that the temperature of mixing water is kept low. Storage containers shall be painted white and shall be protected from direct sun by being covered in shade cloth.

**PSG-3.4 Aggregates**

Add the following:

“The maximum water demand of the fine aggregate shall be 190 l/m<sup>3</sup>. Coarse aggregates shall have a low coefficient of thermal expansion of not greater than 10x10<sup>-6</sup>/ ° C and shall have a maximum water absorption < 1%. Aggregates to be used shall be tested in accordance with subsection C-15 of SABS 1083 or alternatively the source material supplier shall submit a test certificate to confirm that they are not potentially alkali-reactive. The Contractor shall be responsible for locating the sources of all aggregates. The tendered rates shall therefore be deemed to allow for:

- a) the Contractor satisfying himself at tender stage by means of test and test mixes by an accredited laboratory of his source aggregate materials that he intends to use, the importation of aggregates, if necessary, that do comply with this Specification.”

PSG-3.4.3 Storage of aggregates

Add the following:

“In order to reduce concrete placement temperature, the course aggregate shall be protected under shade cloth and sprayed with water on hot days.”

PSG-3.5.1 Admixtures

Add the following:

“A mid or high range water reducing agent and superplasticiser complying with ASTM C 494-81 type F or G is usually required to minimise the water requirement and improve workability, thereby reducing shrinkage and creep and improving water tightness”.

PSG-3.5.2 Air-entraining agents

No air-entraining agents shall be used.

Add the following new clause:

**PSG-3.9 Spacers**

Spacers of approved design include approved plastic or other propriety spacers or purpose made precast mortar blocks. Tie wires shall be fully galvanized. Mortar blocks shall be made of the same mix as the mortar of the concrete in which they are placed. The mortar shall be accurately batched and well compacted. The mortar blocks shall be cured in water for seven days.

**PSG-5 CONSTRUCTION**

PSG-5.2.5 Removal of formwork

Add the following:

“Early stripping of wall and column formwork is preferred as this will reduce peak hydration temperature. The contractor shall however submit proposed stripping times for the Engineer’s approval.”

PSG-5.5.1.6 Prescribed mix concrete

Add the following:

“A concrete mix design shall ensure adequate strength, durability and impermeability. This can be achieved by using high cement content and a low water-cement ratio with mid or high range water reducers to help assure adequate workability. The use of extenders in the mix will produce a low permeable concrete and reduce peak hydration temperature. The Contractor’s concrete mix design shall be submitted to the Engineer for approval. At least six weeks before placing any concrete on the Works, the Contractor shall supply and deliver to the laboratory, at his own cost, samples of the aggregates he proposes to use in the concrete mixes.

PSG-5.5.3.2 Ready-mixed concrete

Add the following:

“Concrete produced at a central concrete production facility other than at the site of the Works shall be accepted for use in the Works. Tests on ready mixed concrete shall be carried out on site in accordance with Clause 7 of SABS 1200G.”

#### PSG-5.5.5 Placing

Add the following:

“The Contractor shall ensure that adequate measures are in place to avoid the occurrence of plastic shrinkage and settlement cracks, especially in slabs. Considering the location of the pipe bridge planned for construction, the contractor shall submit a method statement for placement of concrete for approval by the Engineer.”

#### PSG-5.5.8 Curing and protection

Replace the existing clause with the following:

- b) Curing shall commence as soon as practically possible after casting of concrete and the curing period shall be **not less than 7 days**.
- c) Curing compounds shall not be permitted.
- d) Columns shall be thoroughly sprayed with water immediately after removal of formwork. Columns shall then be wrapped in a double layer of hessian, watered and covered with white or other approved light pigmented plastic sheets. Column heads shall be well watered several times per day to ensure that water penetrates down the hessian over the full height of the columns. Plastic sheeting to be maintained in place.
- e) The duration and intervals of water application shall be determined and adjusted on site to allow for adverse conditions such as high temperatures and/or dry, windy conditions.

#### PSG-5.5.9.2 Adverse weather conditions

Replace the existing clause with the following:

The Contractor shall ensure that the concrete temperature at time of placement **does not exceed 30 °C**. If it is expected that the maximum air temperature on the day of casting will exceed this limit, then concrete shall not be cast on that day, unless special precautions, approved by the Engineer, are taken to limit the temperature of placed concrete.

Concrete temperature readings and air temperature readings (in shade) shall be taken just before placement and recorded in the QA file (applicable also to off-site batching).

#### PSG-5.5.13 **Grouting**

Add the following:

- f) Grouting of Formwork Tie-holes:

The tie-hole voids shall be roughened by wire brushing. The area shall be pre-wetted and coated with an approved cementitious bonding slurry. While the bonding slurry is still wet the void shall be filled with an approved non-shrink grout. The area shall immediately be covered with a patch consisting of wet absorbent material (underfelt or hessian) covered with plastic.

The unit of measurement shall be number (No.) and the rate shall include for all materials reflected on drawing 56748-18-A and 56748-19-A. including the stainless steel brackets, bolts, sleeves, washers, nuts, Neoprene straps, Denso mastic compound, Sikadur 32 as well as all labour, plant and equipment required to complete the installation.

#### PSLB **BEDDING (PIPES)**

#### PSLB-3 **MATERIALS**

#### PSLB-3.1 **Selected Granular Material**

Add the following to this clause;

Alternatively, a clean coarse river sand may be used.

### **PSLB-3.2 Selected Fill Material**

Add the following to this clause;

The Contractor must allow in his rates for the provision of selected fill material from trenches for screening prior to placing in trenches in order to remove unacceptable material. Screened material must be to the Engineer's Approval.

### **PSLB-3.3 Bedding**

Add the following to this clause;

Bedding materials such as river sand or similar approved non-cohesive materials shall be compacted to 90% Mod. AASHTO (except for under roadways) and is required for the entire contract.

### **PSLB-3.4 Selection**

#### **PSLB-3.4.1 Suitable Material Available from Trench Excavation**

Add the following to this clause;

Notwithstanding the requirements of this clause and Clause 3.7 of SABS 1200 DB regarding the use of selective methods of excavating, the Contractor shall use selective methods of excavating that will ensure that material that is suitable and may be required for bedding, is not buried or contaminated by unsuitable material.

### **PSLB-6 TOLERANCES**

#### **PSLB-6.1 Moisture Content and Density**

Add the following to this clause;

The degree of accuracy shall be II.

### **PSLB-8 MEASUREMENT AND PAYMENT**

#### **PSLB-8.1 Principles**

##### **PSLB-8.1.1 Supply of Bedding Materials Measured Separately**

Add the following to this clause;

The measurement for bedding shall be the total through length along the centre of the pipeline measured HORIZONTALLY.

##### **PSLB-8.1.3 Volume of Bedding Materials**

Add the following to this clause;

The volume of bedding material shall exclude the volume taken up by the pipe.

##### **PSLB-8.1.6 Freehaul**

Add the following to this clause;

All haul of material for bedding cradle and selected fill obtained from excavations on site shall be regarded as freehaul.

## **PSLB-8.2 Scheduled Items**

### **PSLB-8.2.5 Overhaul of Material for Bedding Cradle and Selected Fill Blanket**

This item is not applicable to this contract.

## **PSLD SEWERS (SANS 1200 LD)**

### **PSLD-3 MATERIALS**

#### **PS LD-3.5 Manholes, Chambers, etc.**

PSLD-3.5.9 Add new sub-clause:-

##### High Alumina Cement

High Alumina Cement (HAC) shall comply with the requirements of BS 915 and its use shall be in accordance with the manufacturer's instructions for rendering only.

#### PSLD-5.6.2 Benching

PSLD-5.6.2.3 Replace this sub-clause with the following:

All benching and sloping surfaces of the manhole floor shall be rendered in 20mm thick 1:2 High Alumina Cement (HAC) and finished smooth and true with a steel trowel and rounded at corners and edges.

#### PSLD-3.5.8 Manhole covers and frames

Add to the first paragraph of the Sub-Clause:

Precast concrete manhole covers and frames shall comply with the applicable requirements of SABS 1294. The precast concrete lid cover shall be so designed as to withstand a point load, as specified in Clause 8.7 of SABS 1294, in the centre of the lid of 50 kN for light duty covers and 100 kN for heavy duty covers.

## **PS LD-5 CONSTRUCTION**

### PS LD-5.6 Manholes, Inspection Chambers etc.

#### PS LD-5.6.1 General

Add new sub-clause:-

(f) Where new manhole rings are utilised to repair or extend existing manholes, the Contractor shall ensure water tight junctions, even when the diameter of the new manhole rings vary from the old "imperial" rings. If necessary adaptor rings are to be utilised.

## **PSLD-7 TESTING**

### **PSLD-7.1 General**

**PSLD-7.2 Tests and Acceptance/Rejection Criteria****PSLD-7.2.2 Water Test**

Delete the Sub-Clause and Substitute the following:

The water test will not be acceptable under this contract.

**PSLD-7.2.6 Watertightness of Manholes**

Add the following to the Sub-Clause:

Wherever practicable, after selected manholes have been inspected and approved by the Engineer, they are to be tested in his presence or in the presence of his authorised representative in the following manner:

All sewer inlets and outlets to and from the manhole shall be closed with expanding plugs or other apparatus. Water is then to be introduced into the manhole up to a level 25mm below the underside of the roof slab. The water level is to be maintained for not less than one hour or such longer period as may be necessary to accurately record the rate of leakage, if any. Careful and accurate records shall be kept at frequent and regular intervals of the variation in the level of the water in the manhole and of the quantity of water added so that the rate of leakage may be properly determined. In the event of the rate of leakage exceeding 1.25 l per hour per metre of depth of manhole, or in the event of any weakness, defect or fracture or visible signs of leakage occurring in the manhole under test, the Engineer shall have the right to order the test to be discontinued. The Contractor shall have the right to order the test to be discontinued. The Contractor shall thereupon, at his own expense, search for and rectify any weakness or defect in the manhole. Such work or rectification is to consist of repair or replacement, or both. The manhole shall thereafter be re-filled with water and re-tested in the manner specified. This process shall be repeated until a satisfactory test is obtained.

Alternatively, manholes may be tested by thoroughly saturating the ground in the immediate vicinity of each manhole by excavating a shallow trench around the manhole and filling the trench with water. If after maintaining the water level in the trench for two hours, the internal faces of the manhole and benching show no signs or dampness or leakage the manhole shall be deemed to have passed the test.

The Contractor will be paid for the hydraulic testing of manholes at the rate per manholes to be quoted by him in the Bill of Quantities. The Contractor's prices for the hydraulic testing of manholes shall include for all arrangements for the supply of water for testing, the cost of water so used where the water is not obtained free of cost from the Employer, for any necessary rectification work and re-testing and for all labour, plant and materials required to carry out the specified tests.

**PSLD-8 MEASUREMENT AND PAYMENT****PSLD-8.2 SCHEDULED ITEMS****PSLD-8.2.3 Manholes**

Add the following to this clause:

Manholes shall be measured according to depth complete, allowing for precast concrete manhole covers and lids as specified.

All specials to be built into the invert of the manhole as detailed will not be measured separately but will be deemed to be included in the unit cost for a manhole. Allow for testing as specified in Clause PSLD.7.2.6.

PSLD-8.2.11 Connection to Existing Sewer at Manholes

Delete the first two lines and replace with:

The new sewer line is to be connected to the existing manhole. The tendered sum is to include for breaking into the existing manholes, caulking in the new pipe and for demolishing and reforming benching as required, making the manholes watertight again and for dealing with the flow of sewage at the manholes during the intervening period of time.

**C3.4: PARTICULAR SPECIFICATIONS**

In addition to the Standardized and Project Specifications the following Particular Specifications / Policies shall apply to this contract and are available on web address:

<ftp://ftp.durban.gov.za/cesu/StdContractDocs/>:

- C3.4.1 Part AH - OHS Act 1993 Safety Specification  
(26 Pages)
  
- C3.4.2 Standard Environmental Management Plan for Civil Engineering Construction Works  
(24 Pages)

**C3.5: CONTRACT AND STANDARD DRAWINGS****C3.5.1 CONTRACT DRAWINGS / DETAILS**

List the drawings here

**C3.5.2 STANDARD DRAWINGS**

The Standard Drawings to which these Standard Engineering Specifications refer are listed below.

| <b>Dwg No</b> | <b>Description</b>   | <b>Date of Issue</b> |      |
|---------------|--|----------------------|------|
| 38570         | Ring Manholes  | February             | 1990 |
| 38571         | Brick Manhole Details  | February             | 1990 |
| 38572         | Stormwater Inlet Details                                       | February             | 1990 |
| 38573         | Stormwater Inlet Special Details                               | February             | 1990 |
| 38574         | Sewer Manholes: Ramp, Backdrop and Channelling Details         | February             | 1990 |
| 38575         | Sub-Soil Drain, Pipe Bedding and Pipe Protection Details       | February             | 1990 |
| 38576         | Headwall Details   | February             | 1990 |
| 38577         | Kerbing Details  | February             | 1990 |
| 38578         | Concrete Median Barriers                                       | February             | 1990 |
| 38579         | Vehicular and Pedestrian Scoops                                | February             | 1990 |
| 38580         | Concrete Bollard and Steel Guard Rail                          | February             | 1990 |
| 38581         | Retaining Wall, PC Steps, Staircase, Cable Ducts and Headwalls | February             | 1990 |
| 38582         | Precast Concrete Fencing and Aluminium Gates                   | February             | 1990 |
| 38583         | Wire Mesh Fence and Gate Details                               | February             | 1990 |
| 38584         | Standard Hydrant Thrust Blocks and Trenches                    | February             | 1990 |
| 38585         | Water Connections, Pipework and Fittings                       | February             | 1990 |
| 38586         | DP & TC Manholes - Rectangular                                 | February             | 1990 |
| 38587         | DP & TC Manholes - "L" Shaped                                  | February             | 1990 |
| 38588         | DP & TC Manholes - "T" Shaped                                  | February             | 1990 |
| 38589         | DP & TC Cable Ducts and Junction Box Details                   | February             | 1990 |
| 43120         | Typical Details of Grid Inlets                                 | February             | 1990 |

**C3.6: ANNEXURES**

**C3.6.1 “There are no Annexures”**

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**PART C4: SITE INFORMATION**

**C4.1 LOCALITY PLAN**

**C4.2 CONDITIONS ON SITE**

A geotechnical investigation was undertaken and a report is available on request.

**C4.3 TEST RESULTS**

There are no specific test results.