



CLUSTER

Human Settlement, Engineering, and Transport

UNIT

Human Settlements Units

DEPARTMENT

PROJECTS

PROCUREMENT DOCUMENT

INFRASTRUCTURE

Documents are to be obtained, free of charge, in electronic format, from the [National Treasury's eTenders website](#) or the [eThekweni Municipality's website](#).

Contract No: [1H- 28822](#)

Contract Title: [Construction of services at Umlazi S1,S2 & S3 Housing Project\(Phase 1\)](#)

Est. CIDB Grade/ Class: [8 CE](#)

CLARIFICATION MEETING AND QUERIES

Clarification Meeting: [Compulsory Clarification Meeting](#)

Meeting Location, Date, Time: [20th Floor Embassy Building, 221 Anton Lambede Street On 06 May 2024 at 11h00](#)

Queries can be addressed to:
The Employer's Agent's Representative: [Mxolisi Tshabalala](#)
[Tel: 031 322 9458](#)
[eMail: Mxolisi.Tshabalala@durban.gov.za. Email queries to be submitted by 16 May 2024 and consolidated answers to questions to be uploaded 23 May 2024](#)

TENDER SUBMISSION

Delivery Location: [The Tender Box in the foyer of the Municipal Building 166 KE Masinga Road, Durban](#)

Closing Date/ Time: [Friday, 31 May 2024](#) at [11h00](#)

FACSIMILE, eMAIL, or POSTED TENDERS WILL NOT BE ACCEPTED

Issued by:

ETHEKWINI MUNICIPALITY

Deputy Head: [PROJECTS](#)

FOR OFFICIAL USE ONLY

Tenderer Name:			VAT Registered: Yes No
	Price (excl)	VAT	Price (incl)
Submitted: R	R	R	R
Corrected: R	R	R	R

FOR OFFICIAL USE ONLY

Tenderer Name:			VAT Registered: Yes No
	Price (excl)	VAT	Price (incl)
Submitted: R	R	R	R
Corrected: R	R	R	R

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PART T1: TENDERING PROCEDURES**T1.1.1: TENDER NOTICE AND INVITATION TO TENDER**

Tenders are hereby invited for the construction of services at Umlazi S1,S2 & S3 Housing Project in ward 88 within eThekweni Municipality.

(One Contractor is to be Appointed).

Subject	Description	Tender Data Ref.
Employer	The Employer is the eThekweni Municipality as represented by: Strategic Executive: PROJECTS	F.1.1.1
Tender Documents	Documents can only be obtained in electronic format, issued by the eThekweni Municipality. Documentation can be downloaded from the National Treasury's eTenders website or the eThekweni Municipality's Website . The <u>entire document</u> should be printed (on A4 paper) and suitably bound by the tenderer.	F.1.2
Eligibility	It is <u>estimated</u> that tenderers should have a CIDB contractor grading designation of 8 CE (or higher). The CIDB provisions in relation to a Contractor's Potentially Emerging (PE) status <u>do not</u> apply.	F.2.1.1
Clarification Meeting	20th Floor Embassy Building, 221 Anton Lambede Street On 06 May 2024 at 11h00	F.2.7
Seek Clarification	Queries relating to these documents are to be addressed to the Employer's Agent's Representative whose contact details are: Mxolisi Tshabalala Tel: 031 322 9458 eMail: Mxolisi.Tshabalala@durban.gov.za. Email queries to be submitted by 16 May 2024 and consolidated answers to questions to be uploaded 23 May 2024	F.2.8
Submitting a Tender Offer	Tender offers shall be delivered to: The Tender Box in the foyer of the Municipal Building 166 KE Masinga Road, Durban An electronic submission via SSS. Bidders must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid. Bidders are responsible for resolving all access rights and submission queries before the tender closing date. Technical Queries SSS: Jabulani Chauke: 031-322 9535: Queries - email: Jabulani.chauke@durban.gov.za SSS Queries Contact Lindo Dlamini: Tel: 031-3227133/031-3227153 email: selfservice@durban.gov.za	F.2.13

Closing Time	Tender offers shall be delivered on or before Friday, 31 May 2024 at or before 11h00 .	F.2.15
Evaluation of Tender Offers	The 90/10 Price Preference Point System, as specified in the PPPFA Regulations 2022 will be applied in the evaluation of tenders. Refer to Clause F.3.11 of the Tender Data for the Specific Goal(S) for the awarding of Preference Points, and other related evaluation requirements.	F.3.11

Requirements for sealing, addressing, delivery, opening and assessment of tenders are further 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: Strategic Executive: **PROJECTS**

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

- 1) This procurement document.
- 2) “General Conditions of Contract for Construction Works – 3rd 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.
- 3) “City of Durban Technical Specifications” hereinafter referred to as the Standard Engineering Specifications. This document is obtainable separately, and Tenderers shall obtain their own copies of the applicable Sections.
- 4) Drawings, issued separately from this document, or bound in Section C3.4 (as an Annexure).
- 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 Employer’s current (as at advertising date) Supply Chain Management Policy.
 - The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (2022).
 - 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).
 - SANS 1921:2004 – Construction and Management Requirements for Works Contract, Parts 1-3.

- 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 Website at URLs:

- <https://www.etenders.gov.za/>
- <https://www.durban.gov.za/pages/business/procurement>

The entire downloaded document should be printed on white A4 paper (single-sided) and suitably bound by the tenderer.

F.1.4 Communication and employer's agent: The Employer's Agent's Representative is:

Mxolisi Tshabalala

Tel: 031 322 9458

eMail: Mxolisi.Tshabalala@durban.gov.za. Email queries to be submitted by 16 May 2024 and consolidated answers to questions to be uploaded 23 May 2024

The Tenderer's contact details, as indicated in the Contract Data: Clause C1.2.2.2 "Data to Be Provided by Contractor", shall be deemed as the only valid contact details for the Tenderer for use in communications between the Employer's Agent and the Tenderer.

F.1.6 Procurement procedures: Option 1 which is Price and Preference.

F.2: TENDERER'S OBLIGATIONS

F.2.1 Eligibility: General

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

- the Tenderer does not comply with the legal requirements as stated in the Employer's current SCM Policy.
- 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.
- In the event of a Compulsory Clarification Meeting:
 - the Tenderer fails to attend the Compulsory Clarification Meeting.
 - the Tenderer fails to have form "Certificate of Attendance at Clarification Meeting / Site Inspection" (in T2.2) signed by the Employer's Agent or his representative.
- in the case of JV submissions, the JV is not permissible.
- 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.
- The tenderer has not submitted, with this tender, a valid Letter of Good Standing from the Compensation Commissioner as proof of being registered and in good standing with the compensation fund. Reference is to be made to Returnable Document T2.2.13.
- The tender fails to complete and sign the Declaration of Municipal Fees in T2.2: "Returnable Documents" and submits the required documentation. Reference is to be made to Returnable

Document T2.2.12.

SCM Policy (Cl.14(4)) service providers/ contractors to be registered on the eThekwini Municipality Central Supplier Database or be in a position to be so before the award.

In the event of the Tenderer not being registered on the eThekwini Municipality's Central Supplier Database, the tenderer must register on the internet at www.durban.gov.za by following these links:

- Business
- Supply Chain Management (SCM)
- Accredited Supplier and Contractor's Database.

The following are to be noted:

- (a) The information for registration as in the possession of the eThekwini 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.

F.2.1.1 Eligibility: CIDB

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 or higher** class of construction work, are eligible to have their tenders evaluated.

It should be noted that this contract is not part of a Targeted Development Programme (TDP). The CIDB provisions in relation to a Contractor's Potentially Emerging (PE) status do not apply.

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

"Documents are to be obtained, free of charge, in electronic format, from the **National Treasury's eTenders website** or the **eThekwini Municipality's Website**. The entire electronically downloaded document should be printed on white A4 paper (single-sided) 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 up to 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 physical or 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:

**20th Floor Embassy Building, 221 Anton Lambede Street On
11h00**

06 May 2024 at

In the event of a Compulsory Clarification Meeting, Tenderers must sign the attendance register in the name of the tendering entity. The Tenderer's representative(s) at the clarification meeting must be able to clearly convey the discussions at the meeting to the person(s) responsible for compiling the entity's tender offer.

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 (either in hard copy or in electronic format) by the eThekweni Municipality.

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

- Contract No. : **1H- 28822**
- Contract Title : **Construction of services at Umlazi S1,S2 & S3 Housing Project(Phase 1)**

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

**The Tender Box in the foyer of the Municipal Building
166 KE Masinga Road, Durban**

Parts of each tender offer communicated on paper shall be submitted as an original.

Tenderers are to include, with their "hard copy" submission, a memory-stick containing an electronically scanned (300 dpi resolution) Public Document Format (PDF) copy of their complete bid submission. This PDF file should be named using the contract number and the Tenderer's name, eg. **1H – 28822 Tenderers Name. PDF**". The memory-stick must be securely fixed to the paper submission.

An electronic submission via SSS. Bidders must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid. Bidders are responsible for resolving all access rights and submission queries before the tender closing date.

Technical Queries SSS: Jabulani Chauke: 031-322 9535: Queries - email: Jabulani.chauke@durban.gov.za

General SSS Queries Contact Lindo Dlamini: Tel: 031-3227133/031-3227153 email: selfservice@durban.gov.za

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, 31 May 2024**
- Time : **11h00**

F.2.16 Tender offer validity: The Tender Offer validity period is 84 Days from the closing date 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 T2.2 of this procurement document.

F.2.23 Certificates: Refer to 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.

Tenderers are to include, at the back of their tender submission document, a printout of the required documents/ certificates.

The Form of Offer (C1.1.1), Data to be provided by the Contractor (C1.2.2.2), and the Bill of

Quantities (C2.2) are also required to be completed in full.

CIDB Registration

Refer also to returnable form in T2.2: "Eligibility: Verification of CIDB Registration and Status".

Tenderers are to include with their submission a printout of their **CIDB Registration**, 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 printout(s) is to be indicated on the printout. Registration with the CIDB must be reflected as "Active" at time of tender closing.

Tax Clearance

Refer also to returnable form in T2.2: "Tax Compliance Status PIN/ Tax Clearance Certificate".

SARS has introduced a new Tax Compliance Status System. Tenderers must 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. This TCS PIN is to be entered on Returnable Document T2.2.1: "Compulsory Enterprise Questionnaire". Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

Failure to comply will make the tender non-responsive.

Central Supplier Database (CSD)

Refer also to returnable form in T2.2: "Eligibility: CSD Registration Report".

The entities (full) **CSD 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.

Compensation Commissioner

Refer also to returnable form in T2.2: "Eligibility: Registration with Compensation Commissioner".

The tenderer is to supply proof of being registered and in good standing with the compensation fund by submitting a valid **Letter of Good Standing** from the Compensation Commissioner.

Failure to comply will make the tender non-responsive.

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 same platform(s) as the Tender Notification (refer to F.1.2).
- F.3.4 Opening of Tender Submissions:** Tenders will be opened immediately after the closing time for tenders. The public reading of tenders will take place in the SCM Boardroom, 6th Floor, Engineering Unit Building, 166 KE Masinga Road, Durban.
- F.3.11 Evaluation of Tender Offers:**

Functionality

FUNCTIONALITY will be evaluated to determine the responsiveness of tenders received. The minimum score for FUNCTIONALITY is **60 points**. Those tenders not achieving the minimum score will be deemed non-responsive.

The functionality Criteria, Sub-Criteria, Points per Criteria/ Sub-Criteria, Returnable Documentation and Schedules, Method of Evaluation, and Prompts for Judgement are as specified in T1.2.3: "Additional Conditions of Tender".

Preference Point System

The financial offer will be reduced to a comparative basis using the **Tender Assessment Schedule**.

The procedure for the evaluation of responsive tenders is **PRICE AND PREFERENCE** 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 (2022).

Price Points

The **90/10** preference points system will be applied. The Formula used to calculate the **Price Points (max.90)** will be according to that specified Regulation 4.1.

Preference Points

Refer also to T2.2: "MBD 6.1: Preference Points Claim".

The Preference Points (either 20 or 10) will be derived from points allocated/ claimed for **Specific Goals** as indicated in the table(s) below, according to the specified **Goal Weightings**.

Ownership Goal

The tendering entity's Percentage Ownership, in terms of the Ownership Category(s) listed below, is to be used in the determination of the tenderer's claim for Preference Points.

- Ownership Goal
Goal Weighting: 30%

The tendering entity's Percentage Ownership, in terms of the Ownership Category(s) listed below, is to be used in the determination of the tenderer's claim for Preference Points.

Goal Weighting 30%			
Ownership Categories	Criteria	80/20	90/10
Race: Black (w1)	Equals 0%	n/a	0
	Between 0% and 51%	n/a	4
	Greater or equal to 51% and less than 100%	n/a	8
	Equals 100%	n/a	10
Gender: Female (w2)	Equals 0%	n/a	0
	Between 0% and 51%	n/a	4
	Greater or equal to 51% and less than 100%	n/a	8
	Equals 100%	n/a	10
Disabilities (w3)	Equals 0%	n/a	0
	Between 0% and 51%	n/a	4
	Greater or equal to 51% and less than 100%	n/a	8
	Equals 100%	n/a	10
Maximum Goal Points:		n/a	10

<p>The Weightings of the Ownership Categories will be:</p> <ul style="list-style-type: none"> • $w1 = 33.33\%$, $w2=33.33\%$, $w3=33.33\%$ (where: $w1 + w2 + w3 = 100\%$) <p>Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status)</p> <ul style="list-style-type: none"> • Companies and Intellectual Property Commission registration document (CIPC) • CSD report. • B-BBEE Certificate of the tendering entity. • Consolidated BBBEE Certificate if the tendering entity is a Consortium, Joint Venture, or Trust (Issued by verification agency accredited by the South African Accreditation System). • Agreement for a Consortium, Joint Venture, or Trust.
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RDP Goal: The promotion of South African owned enterprises

The tendering entity's Address (as stated on the National Treasury Central Supplier Database (CSD) or on the eThekweni Municipality Vendor Portal) is to be used in the determination of the tenderer's claim for Preference Points for this Specific Goal.

RDP Goal: The promotion of South African owned enterprises Goal Weighting 30%		
Location	80/20	90/10
Not in South Africa	n/a	0
South Africa	n/a	2
KZN	n/a	6
ETM	n/a	10

Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status)

- CSD report

RDP Goal: The promotion SMMEs that are 51% black owned – Contracts > R5m

The tendering entity's Commitment to Sub-Contracting (to Sub-Contractors conforming to the specified ownership demographics) the percentage works, as specified below, is to be used in the determination of the tenderer's claim for Preference Points for this Specific Goal.

Goal Weighting 40%		
Contract Participation Goal	80/20	90/10
Sub-contracting 0%	n/a	0
Sub-contracting =40%	n/a	2
Sub-contracting =45%	n/a	6
Sub-contracting ≥46% and <50%	n/a	10
Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status)		
<ul style="list-style-type: none"> • Contract Participation Goal Plan (% work to be allocated) 		

Targeted Procurement

(SCMP Cl.23) After tender submissions have been evaluated in terms of the **Preference Point System** and the highest points scorer has been ascertained, the requirements of targeted procurement will be applied according to the provisions of the SCM Policy.

Targeted Procurement requirements are specified in the "**Additional Conditions of Tender**" in T1.2.3.4.

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:

- 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.
- The tenderer is **registered, and "Active", with the Construction Industry Development Board**, at time of tender closing, in an appropriate contractor grading designation.
- 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.
- 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.
- 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.
- The tenderer is **registered and in good standing with the compensation fund or with a licensed compensation insurer**.
- 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**.

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.

Notwithstanding clause F.1.1.3 of the Standard Conditions of Tender the municipality reserves the right to award or not award the tender based on the municipalities available budget. The municipality has a firm intention to proceed with the work, subject to funding being identified.

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)**.

Tenderers are to include, with their “hard copy” submission, a memory-stick containing an electronically scanned (300 dpi resolution) Public Document Format (PDF) copy of their complete bid submission. This PDF file should be named using the contract number and the Tenderer’s name, eg. **1H–28822 Tenderers Name.PDF**”. The memory-stick must be securely fixed to the paper submission.

T1.2.3 ADDITIONAL CONDITIONS OF TENDER**T1.2.3.1 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

T1.2.3.2 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.

T1.2.3.3 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.

T1.2.3.4 Targeted Procurement

Targeted Procurement provisions is applicable to this tender.

(SCMP Cl.52.21(d) If feasible to contract for a contract above R30m, an organ of state must apply subcontracting to advance designated groups.

(SCMP Cl.52.21(e) Tenders that are between the contract value of R5m and R30m (incl.) must, where feasible, allow for subcontracting in line with the Council approved Economic Empowerment Framework.

T1.2.3.5 Functionality Specification

Functionality Evaluation is applicable to this tender.

The value of W_2 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		40
Project Organogram and Experience of Key Staff	Contracts Manager	12
	Site agent	15
	Foremen	13
Preliminary Programme		10
Construction Methodology & Quality Control		10
Maximum possible score for Functionality (M_s)		100

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:

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 T2.2: Returnable Schedules:

Functionality Criteria	Returnable Schedules
Tenderer's Experience	<ul style="list-style-type: none"> • Experience of Tenderer
Project Organogram and Experience of Key Staff	<ul style="list-style-type: none"> • Proposed Organization and Staffing • Key Personnel • CV's with Experience of Key Personnel
Preliminary Programme	<ul style="list-style-type: none"> • Preliminary Programme
Construction Methodology & Quality Control	<ul style="list-style-type: none"> • Construction Approach, Methodology, and Quality Control • Schedule of Proposed Subcontractors • Plant and Equipment

Unless otherwise stated, evaluation criteria will be adjudicated with respect to the contract specific Scope of Work, as specified in C.3. In this regard the following definitions apply to the evaluation criteria prompts for judgement:

- “**successfully completed**” implies a project has been completed on time and to specification;
- “**similar nature**” implies projects that were of a value of at least 70% of this tender’s value, and had a comparable Scope of Work in terms of technical requirements and operations;
- “**experience**” implies experience on projects of a similar nature;
- “**accredited degree / diploma**” implies a minimum 3 year qualification within the built environment, from a registered University or Institute of Technology.

Criterion: Tenderer’s Experience	
Note: Projects of a similar nature that will be considered shall include housing development projects which include services (roads, stormwater, sewer and water) and projects exceeding R38 000 000,00 in value.	
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 to 3 projects</u> of a similar nature within the past 10 years.
Level 3	To have successfully completed <u>4 to 5 projects</u> of a similar nature within the past 10 years.
Level 4	To have successfully completed <u>6 to 7 projects</u> of a similar nature within the past 10 years.
Level 5	To have successfully completed <u>7+ projects</u> of a similar nature within the past 10 years.

Criterion: Project Organogram and Experience of Key Staff			
	CONTRACTS MANAGER	SITE AGENT	FOREMAN
Level 0	No information provided OR submission of no substance / irrelevant information provided OR less than 2 year’s experience OR Relevant accredited diploma / degree and less than 1 year’s experience. (registered Pr. Tech/ SACPMP)	No information provided OR submission of no substance / irrelevant information provided OR less than 2 year’s experience. OR Relevant accredited diploma / degree and less than 1 year’s experience. (registered Pr. Tech/ SACPMP)	No information provided OR submission of no substance / irrelevant information OR Less than 2 year’s experience. (N6 qualification in Built Environment)
Level 1	Relevant accredited diploma / degree and minimum 1 year’s experience. (registered Pr. Tech/ SACPMP)	Relevant accredited diploma / degree and minimum 1 year’s experience. (registered Pr. Tech/ SACPMP)	Minimum 2 year’s experience. (N6 qualification in Built Environment)
Level 2	Relevant accredited diploma / degree and minimum 2 year’s experience. (registered Pr. Tech/ SACPMP)	Relevant accredited diploma / degree and minimum 2 year’s experience. (registered Pr. Tech/ SACPMP)	Minimum 3 year’s experience. (N6 qualification in Built Environment)
Level 3	Relevant accredited diploma / degree and minimum 4 year’s experience. (registered Pr. Tech/ SACPMP)	Relevant accredited diploma / degree and minimum 4 year’s experience. (registered Pr. Tech/ SACPMP)	Minimum 5 year’s experience. (N6 qualification in Built Environment)
Level 4	Relevant accredited diploma / degree and minimum 7 year’s experience. (registered Pr. Tech/ SACPMP)	Relevant accredited diploma / degree and minimum 7 year’s experience. (registered Pr. Tech/ SACPMP)	Minimum 8 year’s experience. (N6 qualification in Built Environment)
Level 5	Relevant accredited diploma / degree and minimum 9 year’s experience. (registered Pr. Tech/ SACPMP)	Relevant accredited diploma / degree and minimum 9 year’s experience. (registered Pr. Tech/ SACPMP)	Minimum 10 year’s experience. (N6 qualification in Built Environment)

Criterion: Preliminary Programme	
Level 0	No information provided; OR submission of no substance / irrelevant information provided
Level 1	The tenderer has misunderstood certain aspects of the Scope of Work and does not deal with the critical aspects of the project.
Level 2	The programme does not adequately deal with the critical characteristics of the project or the plan and manner in which risk is to be managed.
Level 3	Programme covers 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). Programme must show the critical path
Level 4	In addition to the requirements of level 3, the programme covers all activities, meetings, requirements and is sufficiently flexible to accommodate changes that may be required during execution within project completion time.
Level 5	In addition to the requirements of level 4, the program covers all activities, meetings, requirements and accommodates changes and details ways to improve the overall project outcome within the completion time.

Criterion: Construction Methodology & Quality Control	
Level 0	No information provided; OR submission of no substance / irrelevant information provided
Level 1	The technical approach / methodology, plant and equipment is poor and gives no relevant information in satisfying the projects objectives Quality control statement is poor with no relevant information
Level 2	The technical approach and/or methodology is less than acceptable and unlikely to satisfy project objectives or requirements. Plant and equipment is unlikely to provide adequate protection of the works. Quality control statement is generic.
Level 3	Brief overview of a site specific methodology which encompasses all programmed activities in appropriate order and includes staff, plant and equipment resources, including subcontractors if applicable, a brief description of preparatory work, construction processes including finishing works for each activity. Quality control statements are site specific with statements covering required sampling and testing requirements for the programmed activities.
Level 4	The methodology is specifically tailored to address specific project requirements. The methods and approach to managing risk etc. are specifically tailored to the critical characteristics of the project. The plant and equipment are specifically tailored to the project requirements and are sufficiently adaptable to accommodate changes that may be required during execution Quality control statements are site specific covering required sampling and testing for programmed activities including site specific quality control checklist for programmed activities
Level 5	Besides meeting the "above Level 4" rating, 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. Plant and equipment proposals and ownership/provision arrangements are most likely to ensure a satisfactory project outcome. Quality control statements are site specific covering required sampling and testing for all programmed activities including site specific quality control checklist for all programmed activities

PART T2: RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

T2.1.1 General

The Tender Submission Documentation must be submitted in its entirety. All forms must be properly completed as required.

The Tenderer is required to complete each and every Schedule and Form listed below to the best of their 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 non-responsive.

T2.1.2 Returnable Schedules, Forms and Certificates

Entity Specific

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T2.2.2	Certificate of Attendance at Clarification Meeting.....	20
T2.2.3	Tax Compliance Status PIN / Tax Clearance Certificate.....	21
T2.2.4	Contractor's Health and Safety Declaration.....	22
T2.2.5	MBD 4: Declaration of Interest.....	23
T2.2.6	MBD 5: Declaration for Procurement Above R10 Million.....	24
T2.2.7	MBD 6.1: Preference Points Claim Form ITO the Preferential Regulations.....	27
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T2.2.10	Joint Venture Agreements (if applicable).....	35
T2.2.11	Record of Addenda to Tender Documents (if applicable).....	36

Eligibility

T2.2.12	Eligibility: Declaration of Municipal Fees.....	37
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Technical or Functionality Evaluation

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T2.2.20	Preliminary Programme.....	45
T2.2.21	Construction Approach, Methodology, and Quality Control.....	46
T2.2.22	Schedule of Proposed Subcontractors.....	47
T2.2.23	Plant and Equipment.....	48
T2.2.24	Contractor's Health and Safety Plan.....	49

T2.2 RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates, as listed in T2.1.2, can be found on pages [17](#) to [50](#).

NOTE

The **Form of Offer** (C1.1.1), The **Data to be Provided by Contractor** (C1.2.2.2), and the **Bill of Quantities** (C2.2) are also required to be completed by the tenderer.

T2.2.1 COMPULSORY ENTERPRISE QUESTIONNAIRE

Ref	Description	Complete or Circle Applicable
1.1	Name of enterprise	
1.2	Name of enterprise's representative	
1.3	ID Number of enterprise's representative	
1.4	Position enterprise's representative occupies in the enterprise	
1.5	National Treasury Central Supplier Database Registration number	MAAA
1.6	eThekweni Supplier Database: Reference number (PR), if any:	PR
1.7	VAT registration number, if any:	
1.8	CIDB registration number, if any:	
1.9	Department of Labour: Registration number	
1.10	Department of Labour: Letter of Good Standing Certificate number	
2.0	Particulars of sole proprietors and partners in partnerships (attach separate pages if more than 4 partners)	
	Full Name	Identity No.
	Personal income tax No. *	
2.1		
2.2		
2.3		
2.4		
3.0	Particulars of companies and close corporations	
3.1	Company registration number, if applicable:	
3.2	Close corporation number, if applicable:	
3.3	Tax Reference number, if any:	
3.4	South African Revenue Service: Tax Compliance Status PIN:	

4.0 Record in the service of the state (Insert on a separate page if necessary)

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 | <input type="checkbox"/> a member of any provincial legislature |
| <input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | <input type="checkbox"/> a member of the National Assembly or the National Council of Province |
| <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) | <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 mths

5.0 Record of spouses, children and parents in the service of the state (Insert on a separate page if necessary)

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:

- | | |
|---|--|
| <input type="checkbox"/> a member of any municipal council | <input type="checkbox"/> a member of any provincial legislature |
| <input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> a member of an accounting authority of any national or provincial public entity |
| <input type="checkbox"/> a member of the board of directors of any municipal entity | <input type="checkbox"/> a member of the National Assembly or the National Council of Province |
| <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) | <input type="checkbox"/> 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 mths

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

- i) authorizes the employer to verify the tenderers tax clearance status from the South African Revenue Services that it is in order.
- ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004.
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption.
- 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 tenderers or those responsible for compiling the scope of work that could cause or be interpreted 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.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.2 CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING / SITE INSPECTION

Reference is to be made to Clauses F.2.1(c) and F.2.7 of the Tender Data.

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:

T2.2.3 TAX COMPLIANCE STATUS PIN / TAX CLEARANCE CERTIFICATE

Reference is to be made to Clauses F.2.23 and F.3.13(a) of the Tender Data.

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.

The TCS PIN(s) are to be entered under item 3.4 on form **T2.1.2.1: Compulsory Enterprise Questionnaire**.

Tenderers are to include, at the back of their tender submission document, a printout of their Tax Compliance Status PIN (TCS PIN) OR an original Tax Clearance Certificate.

Failure to include the required document will make the tender submission non-responsive.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and that the requested documentation has been included in the tender submission.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.4 CONTRACTOR'S HEALTH AND SAFETY DECLARATION

If Functionality is applicable as part of tender evaluation, reference is to be made to Clause F3.11.9 of the of the Conditions of Tender.

Reference is to be made to Clauses F.2.1(e) and F.2.23 of the Tender Data.

In terms of Clause 5(1)(h) of the OHSA 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 OHSA 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 OHSA 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 - Yes or No):

- (a) From my own competent resources as detailed in 4(a) hereafter.
- (b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter:
- (c) From outside sources by appointment of competent specialist Subcontractors as detailed in 4(c) hereafter:

Circle Applicable	
Yes	NO
Yes	NO
YES	NO

- 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) 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, the undersigned, hereby undertake, if this 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, the undersigned, confirm that copies of this company's approved Health and Safety Plan, the Client's Safety Specifications as well as the OHSa 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, the undersigned, hereby confirm that adequate provision has been made in the 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 OHSa 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, the undersigned, agree that failure to complete and execute this declaration to the satisfaction of the Client will mean that this company is unable to comply with the requirements of the OHSa 1993 Construction Regulations (2014) and accept that this tender will be prejudiced and may be rejected at the discretion of the Client.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____ Date _____

SIGNATURE: _____

T2.2.5 MBD 4: DECLARATION OF INTEREST

MSCM Regulations: **“in the service of the state”** means to be:

- (a) a member of:
 - (i) any municipal council.
 - (ii) any provincial legislature.
 - (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.
- (f) an employee of Parliament or a provincial legislature.

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

- 1 No bid will be accepted from persons **in the service of the state**¹.
- 2 Any person, having a kinship with persons **in the service of the state**, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to **persons in service of the state**, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest.
- 3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Name of enterprise	Complete T2.1.2.1 Item 1.1
Name of enterprise’s representative	Complete T2.1.2.1 Item 1.2
3.2 ID Number of enterprise’s representative	Complete T2.1.2.1 Item 1.3
3.3 Position enterprise’s representative occupies in the enterprise	Complete T2.1.2.1 Item 1.4
3.4 Company Registration number	Complete T2.1.2.1 Item 3.1 or 3.2
3.5 Tax Reference number	Complete T2.1.2.1 Item 3.3
3.6 VAT registration number	Complete T2.1.2.1 Item 1.7

3.7 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted.

Circle Applicable	
3.8 Are you presently in the service of the state?	YES NO
If yes, furnish particulars:	
.....	
3.9 Have you been in the service of the state for the past twelve months?	
YES NO	
If yes, furnish particulars:	
.....	

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

3.11 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? YES NO
 If yes, furnish particulars:

3.12 Are any of the company’s directors, trustees, managers, principle shareholders or stakeholders in service of the state? YES NO
 If yes, furnish particulars:

3.13 Are any spouse, child or parent of the company’s directors, trustees, managers, principle shareholders or stakeholders in service of the state? YES NO
 If yes, furnish particulars:

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

4 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			

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____ Date _____
 SIGNATURE: _____

**T2.2.6 MBD 5: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION
(ALL APPLICABLE TAXES INCLUDED)**

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

	Circle Applicable	
1.0 Are you by law required to prepare annual financial statements for auditing?	YES	NO
1.1 If YES, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.		
2.0 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?	YES	NO
2.1 If NO, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.		
2.2 If YES, provide particulars.		
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?	YES	NO
3.1 If YES, provide particulars.		
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?	YES	NO
4.1 If YES, provide particulars.		

If required by 1.1 above, tenderers are to include, at the back of their tender submission document, a printout of their audited annual financial statements.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and, if required, that the requested documentation has been included in the tender submission.

NAME (Block Capitals): _____ Date _____

SIGNATURE: _____

T2.2.7 MBD 6.1: PREFERENCE POINTS CLAIM
In terms of THE PREFERENTIAL PROCUREMENT REGULATIONS (2022)

Reference is to be made to Clause F.3.11 of the Tender Data.

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

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

1.0 GENERAL CONDITIONS

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

- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The applicable preference point system for this tender is the 90/10 preference point system **will be applicable in this tender. The lowest/ highest acceptable tender will be used to determine the applicable system once tenders are received.**

1.3 Preference Points for this tender shall be awarded for:

- Price and Specific Goals: To 90 (price) and 10 (specific goals), in terms of 1.2 above.
- The total Preference Points, for Price and Specific Goals, is 100.

1.4 Failure on the part of the tenderer to submit the required proof or documentation, in terms of the requirements in the Conditions of Tender for claiming specific goal preference points, will be interpreted that preference points for specific goals are not claimed.

1.5 The Municipality reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard of preferences, in any manner required by the Municipality.

2.0 DEFINITIONS

2.1 “tender” means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation.

2.2 “price” means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts.

2.3 “rand value” means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes.

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

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

3.0 FORMULA FOR CALCULATION OF PREFERENCE PRICE POINTS

3.1 PROCUREMENT OF GOODS AND SERVICES

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

$$\begin{array}{ccc} \underline{80 / 20 \text{ Points System}} & \text{OR} & \underline{90 / 10 \text{ Points System}} \\ P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) & & P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right) \end{array}$$

Where:

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

4.0 POINTS AWARDED FOR SPECIFIC GOALS

- 4.1 In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goal(s) stated in Table 1 below, as supported by proof/ documentation stated in the Conditions of Tender:
- 4.2 In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of:
- an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system, or
 - any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

TABLE 1: Specific Goals for the tender and points claimed are indicated per the table below.

Tenderers are to indicate their points claim for each of the Specific Goals.

The Specific Goals to be allocated points in terms of this tender	Number of points ALLOCATED (80/20 system)	Number of points ALLOCATED (90/10 system)	Number of points CLAIMED (80/20 system)	Number of points CLAIMED (90/10 system)
Ownership Goal: CATEGORISED: RACE, GENDER AND DISABILITY	6	n/a		n/a
RDP Goal: The promotion of South African owned enterprises.	6	n/a		n/a
RDP Goal: The promotion of SMMEs owned by 51% black (contracts >R5m)	8	n/a		n/a
Should the municipality apply a combination of Specific Goals, the points for the individual goals will be weighted according to the Goal Weightings specified in the Tender Data (Clause F.3.11) to arrive at the final points for Preferential Points for Specific Goals.				

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, certify that the points claimed, based on the specific goals as specified in the tender, qualifies the tendering entity for the preference(s) shown.

I acknowledge that:

- 1) The information furnished is true and correct.
- 2) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.
- 3) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct.
- 4) If the specific goals have been claimed or obtained on a fraudulent basis, or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have:
 - (a) disqualify the person from the tendering process.
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct.
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation.
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.8 MBD 8: DECLARATION OF BIDDER’S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

- 1.0 This Municipal Bidding Document must form part of all bids invited.
- 2.0 It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.
- 3.0 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.
 - 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).
- 4.0 In order to give effect to the above, the following questions must be completed and submitted with the bid.

4.1 Is the bidder or any of its directors listed on the National Treasury’s Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?

(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer / Authority of the institution that imposed the restriction after the audi alteram partem rule was applied.)

The Database of Restricted Suppliers now resides on the National Treasury’s website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.

Circle Applicable	
YES	NO

4.1.1 If YES, provide particulars.

.....

.....

4.2 Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?

The Register for Tender Defaulters can be accessed on the National Treasury’s website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.

YES	NO
-----	----

4.2.1 If YES, provide particulars.

.....

.....

4.3 Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?

YES	NO
-----	----

4.3.1 If YES, provide particulars.

.....

.....

4.4 Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?

YES	NO
-----	----

4.4.1 If YES, provide particulars.

.....

.....

4.5 Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?

YES	NO
-----	----

4.5.1 If YES, provide particulars.

.....

.....

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

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

NAME (Block Capitals):

Date

.....

SIGNATURE:

.....

T2.2.9 MBD 9: CERTIFICATE OF INDEPENDENT BID DETERMINATION**NOTES**

- ¹ Includes price quotations, advertised competitive bids, limited bids and proposals.
- ² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.
- ³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

- 1.0 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2.0 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a *pe se* prohibition meaning that it cannot be justified under any grounds.
- 3.0 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
- a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4.0 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid rigging.
- 5.0 In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of:

(Name of Bidder)

that:

1. I have read and I understand the contents of this Certificate.
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect.
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation.
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience.
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement, or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - (a) prices.
 - (b) geographical area where product or service will be rendered (market allocation).
 - (c) methods, factors or formulas used to calculate prices.
 - (d) the intention or decision to submit or not to submit, a bid.
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid.
 - (f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements, or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.10 JOINT VENTURES AGREEMENTS

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

T2.2.11 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		

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

It is also confirmed that the requirements, as stated on the Addenda, have been complied with.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.12 ELIGIBILITY: DECLARATION OF MUNICIPAL FEES

Reference is to be made to Clause F.2.1(f)(ii) of the Tender Data.

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											
Electricity											
Water											
Rates											
JSB Levies											
Other											

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.

- 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 are to be provided.
- Where the tenderer’s Municipal Accounts are part of their lease agreement, then a copy of the agreement, or an official letter to that effect, is to be provided.

Tenderers are to include, at the back of their tender submission document, a printout of the above account’s and or agreements signed with the municipality.

Failure to include the required document will make the tender submission non-responsive.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and that the requested documentation has been included in the tender submission.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.13 ELIGIBILITY: REGISTRATION WITH COMPENSATION COMMISSIONER

Reference is to be made to Clause F.2.1(f)(i) of the Tender Data.

The Occupational Injuries and Diseases Act (130 of 1993 as amended) (the Act) refers. A summary of the pertinent Clauses are listed below. The act is to be referenced for the full text of the clauses.

Clause 80: Employer to register with commissioner and furnish him with particulars

The Act requires that an employer carrying out business in the Republic to register with the Compensation Commissioner. Any person who fails to comply with the provisions of the this clause is guilty of an offence.

Clause 82: Employer to furnish returns of earnings

The Act requires an employer to furnish the commissioner with a return showing:

- The amount of earnings paid by him to his employees.
- Any further information as may be prescribed or as the commissioner may require.

Any employer who fails to comply with the provisions of the this clause is guilty of an offence.

Clause 86: Assessment to be paid by an employer to commissioner

The Act states that an employer will receive notices of assessment from the commissioner. The employer must pay the commissioner the assessment amount on the notices.

Clause 89: Mandators and contractors

The Act requires a contractor (a person with a contract with a mandator) to register as an employer in accordance with the provisions of the Act and pay the necessary assessments. Failing registration or payment of assessments, the mandator is required to pay the assessments in respect of the employees of the contractor. The mandator is allowed to recover the assessment amounts paid from the contractor.

The Department of labour issues contractors with a **Letter of Good Standing** if the contractor has complied with the requirement(s) of the Act and is in "good standing" with the Compensation Fund. Employers can check the validity of such Letters of Good Standing on the internet (<https://cfoonline.labour.gov.za/VerifyLOGS>).

Tenderers are to include, at the back of their tender submission document, a printout of their most recent Letter of Good Standing from the Department of Labour.

Failure to include the required document will make the tender submission non-responsive.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and that the requested documentation has been included in the tender submission.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.14 ELIGIBILITY: CSD REGISTRATION REPORT

Reference is to be made to Clauses F.2.1(e) and F.2.23 of the Tender Data.

The Conditions of Tender, Clause F.2.1: 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.

CSD Registration Reports can be obtained from the National Treasury's CSD website at <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.

The screenshot shows the beginning of a CSD Registration Report. At the top left is the logo for the Central Supplier Database for Government. To the right are two input fields: 'Report Date:' and 'Report Ran By:'. Below this is a green horizontal bar with the text 'CSD REGISTRATION REPORT'. Underneath is a section titled 'SUPPLIER IDENTIFICATION' which contains a grid of input fields for the following information:

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			

Tenderers are to include, at the back of their tender submission document, a printout of their (full) CSD Registration Report.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and that the requested documentation has been included in the tender submission.

NAME (Block Capitals): _____ Date _____

SIGNATURE: _____

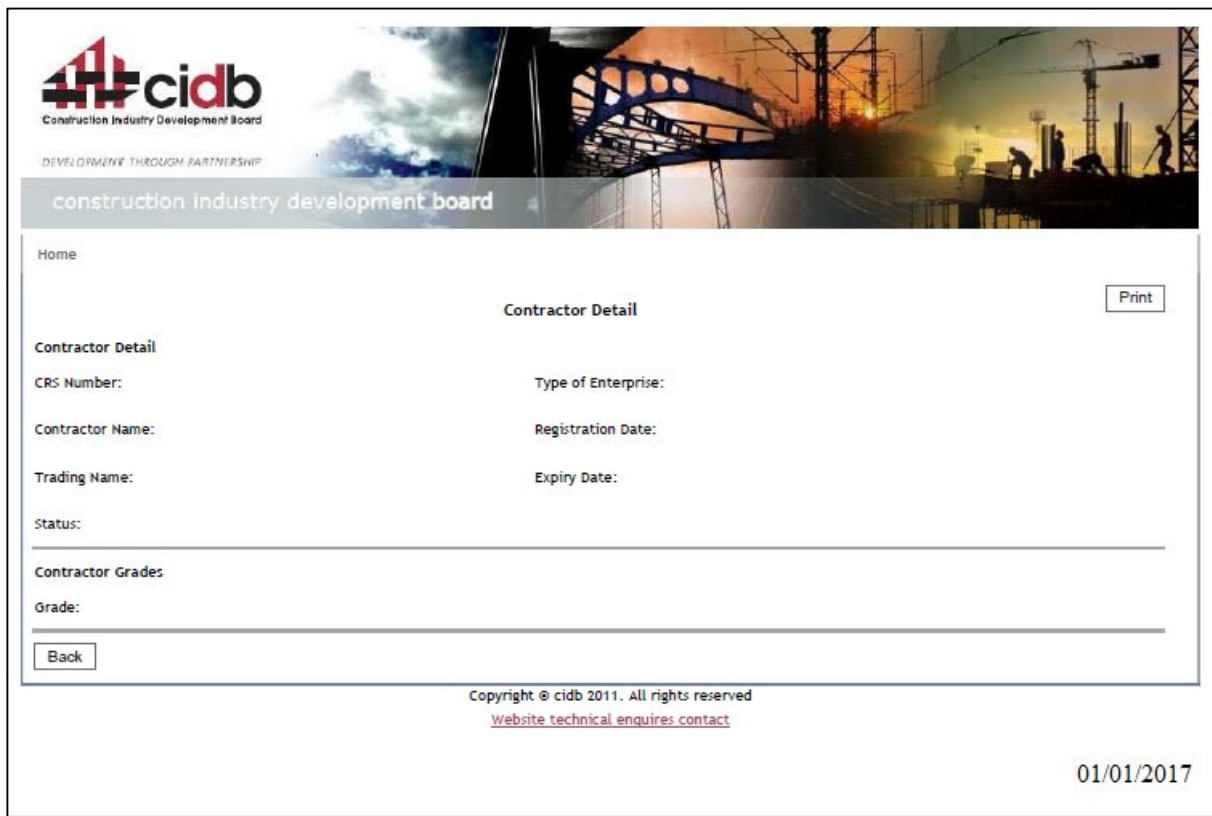
T2.2.15 ELIGIBILITY: VERIFICATION OF CIDB REGISTRATION AND STATUS

Reference is to be made to Clause F.2.1.1 and F.2.23 of the Tender Data.

The Conditions of Tender, **Clause F.2.1.1: 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. The required class of construction work is specified in Clause F.2.1.1.

CIDB Registrations can be obtained from the CIDB website at <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 the beginning of the printout obtained from the above website.



Tenderers are to include, at the back of their tender submission document, a printout of their registration with the CIDB.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct, and that the requested documentation has been included in the tender submission.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.16 EXPERIENCE OF TENDERER

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

The following is a statement of works of similar nature (in relation to the scope of works) recently (within the past 10 years) executed by myself / ourselves.

Tenderers are to submit copies of signed completion certificates for all projects submitted.

EMPLOYER: CONTACT PERSON AND TELEPHONE NUMBER	CONSULTING ENGINEER: CONTACT PERSON AND TELEPHONE NUMBER	NATURE OF WORK	VALUE OF WORK (inclusive of VAT)	DATE COMPLETED

Attach additional pages if more space is required

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.17 PROPOSED ORGANISATION and STAFFING

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

The tenderer should propose the structure and composition of their team i.e. the main disciplines involved, the key staff member / expert responsible for each discipline, and the proposed technical and support staff and site staff.

The roles and responsibilities of each key staff member / expert should be set out as job descriptions. In the case of an association / joint venture / consortium, it should, indicate how the duties and responsibilities are to be shared.

The tenderer must attach his / her organization and staffing proposals to this page. (this is to include both the on-site and off-site staffing resources used for this project)

In addition to any lists, this information should also be shown in an organogram format (flow chart) clearly indicating the staff hierarchy and reporting lines, again for on- and off-site resources.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise, confirms that the contents of this schedule are within my personal knowledge and are to the best of my belief both true and correct.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.18 KEY PERSONNEL

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

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.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

.....

SIGNATURE:

.....

T2.2.19 EXPERIENCE OF KEY PERSONNEL

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

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

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____

Date

SIGNATURE: _____

T2.2.20 PRELIMINARY PROGRAMME

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

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

PROGRAMME													
ACTIVITY	WEEKS / MONTHS												

Note: The programme must be based on the completion time as specified in the Contract Data.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____ Date _____
SIGNATURE: _____

T2.2.21 CONSTRUCTION APPROACH, METHODOLOGY, AND QUALITY CONTROL

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

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.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.22 SCHEDULE OF PROPOSED SUBCONTRACTORS

The following firms have been identified as possible subcontractors for work in this contract.

NAMES AND ADDRESSES OF PROPOSED SUBCONTRACTORS	NATURE AND EXTENT OF WORK TO BE SUBCONTRACTED	PREVIOUS EXPERIENCE WITH SUBCONTRACTOR

Attach additional pages if more space is required

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals): _____ Date _____

SIGNATURE: _____

T2.2.23 PLANT and EQUIPMENT

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

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.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.24 CONTRACTOR'S HEALTH AND SAFETY PLAN

Refer to Clause F3.11.9 for Functionality Points evaluation prompts (if applicable).

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 **C.3: Project Specification**. A generic plan will not be acceptable.

I, the undersigned, who warrants that they are authorised to sign on behalf of the Tenderer, confirms that the information contained in this form is within my personal knowledge and is to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

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: 1H- 28822

Contract Title: Construction of services at Umlazi S1,S2 & S3 Housing Project(Phase 1).

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 3rd 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).

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 Required**.

1.1.1.14 The **time for achieving Practical Completion**, from the Commencement Date is **24 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:
Strategic Executive: **PROJECTS**

1.2.1.2 The address of the Employer is: Human Settlements Units
Physical : Human Settlements, 3rd floor, Shell House, 221 Anton Lembede Street (formally known as Smith Street)
Postal : **P.O. BOX 3858, Durban,4000**
Telephone : **031 322 9381**
Fax : **N/A**
E-Mail : **Oscar.Kunene@durban.gov.za**

1.1.1.16 The **name of the Employer's Agent** is **Mxolisi Tshabalala**

1.2.1.2 The address of the Employer' Agent is:
Physical : **90 20th Floor, Embassy Building, 199 Lembede Street, Durban, 4001**
Postal : **P.O. BOX 3858, Durban,4000**
Telephone : **031 322 9458**
Fax : **N/A**
E-Mail : **Mxolisi.Tshabalala@durban.gov.za**

1.1.1.26 The **Pricing Strategy** is **by Fixed 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 **10%** contingencies.

Note:

- i) “similar nature” implies projects that were of a value of at least 70% of this tender’s value, and had a comparable Scope of Work in terms of technical requirements and operations.
- ii) “experience” implies experience on projects of a similar nature.
- iii) “accredited degree / diploma” implies a minimum 3-year qualification within the built environment, from a registered University or Institute of Technology.

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)
- CV(s) of Key Site Staff (refer to Clause 4.11.1)
- CPG Implementation Plan (if applicable)

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 1000** (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

6.5.1.2.3 The **percentage allowance** to cover overhead charges for daywork are as follows:

- **80%** of the gross remuneration of workmen and foremen actually engaged in the daywork;
- **20%** on the net cost of materials actually used in the completed work.

No allowance will be made for work done, or for materials and equipment for which daywork rates have been quoted at tender stage.

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 for Labour, Plant, and Materials shall be based on **December 2021 = 100**.
- The Index for Fuel 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.

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 10 000 000.00**

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 2 000.00**

- Maximum first excess: **R 10 000.00**

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 1 500 000.00**
- Consequential loss to be covered by policy: **Yes**
- Liability section of policy to be extended to cover blasting: **R 1 000 000.00**
- Maximum excess per claim or series of claims arising out of any one occurrence: **R 20 000.00**

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: **R 2 000.00**
- Maximum first excess: **R 10 000.00**.

Insurance of Works

- Minimum amount for additional removal of debris (no damage): **Nil**.
- 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."

10.7.1 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 Wards 88**. 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 **40%** of the contract value (excluding PC Sum items and Fixed Cost allowances) to be subcontracted to contractors who are **>51% Black 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	Level 1 Unknown	Level 2 No Schooling	Level 3 Grade 1-3	Level 4 Grade 4	Level 5 Grade 5-6
	Level 6 Grade 7- 8	Level 7 Grade 9	Level 8 Grade 10-11	Level 9 Grade 12	Level 10 Post Matric
• Category of Employment	Category A: Employed as Local Labour for this contract only Category B: Temporarily employed by the Contractor Category C: Permanently employed by the Contractor				

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

[For contract awards over R10m] The Contractor shall be subjected to “Performance Monitoring” assessments in terms of the applicable Section (S.53) of the Employer’s Supply Chain Management Policy.

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

C1.2.3.6 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.

C2.2: BILL OF QUANTITIES

The Bill of Quantities follows and comprises of 31 Pages (Page 64 -95)

ETHEKWINI MUNICIPALITY: HUMAN SETTLEMENTS

CONTRACTOR GRADING: 8CE

CONSTRUCTION OF SERVICES AT UMLAZI S1,S2,&S3 HOUSING PROJECT, WARD 88

Construction of services at Umlazi S1,S2 & S3 Housing Project(Phase 1)

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
A1.1.1	SANS	SECTION A: PRELIMINARY AND GENERAL				
	1200 A	GENERAL				
A1.1.2	8.3	Fixed - Charge Items				
A1.1.2.1	8.3.1	Contractual Requirements	Sum	1		
A1.1.2.2	8.3.2	Establish Facilities on the Site :				
A1.1.2.2.1	PSA8.3.2.1	i) Facilities for Employer's Agent				
A1.1.2.2.1.1		a) Office buildings as per PSAB3.2.1	Sum	1		
A1.1.2.2.1.2		b) Car port (3 No.)	Sum	1		
A1.1.2.2.1.3	PSAB8.1	c) Broadband USB Modem (4G)	Sum	1		
A1.1.2.2.1.4		d) Nameboards (2 No.)	Sum	1		
A1.1.2.2.1.5		e) Survey assistant and survey materials	Sum	1		
A1.1.2.2.1.6		f) Printer, scanner and copier	Sum	1		
A1.1.2.2.2	PSA8.3.2.2	ii) Facilities for Contractor				
A1.1.2.2.2.1		a) Offices and storage sheds	Sum	1		
A1.1.2.2.2.2		b) Workshops	Sum	1		
A1.1.2.2.2.3		c) Ablution and latrine facilities	Sum	1		
A1.1.2.2.2.4		d) Tools and equipment	Sum	1		
A1.1.2.2.2.5		e) Water supplies, electric power and communications	Sum	1		
A1.1.2.2.2.6		f) Dealing with water (Subclause 5.5)	Sum	1		
A1.1.2.2.2.7		g) Access (Subclause 5.8)	Sum	1		
A1.1.2.2.2.8		h) Plant	Sum	1		
A1.1.2.2.2.9	8.3.3	Other fixed-charge obligations	Sum	1		
A1.1.2.2.2.10	8.3.4	Remove Engineer's and Contractor's Site establishment on completion (if applicable due to phasing of project)	Sum	1		
A1.1.2.2.2.11	PSA8.3.5	Provision Establishment of Site Security Services as per PS 11 and PSA 5.11.1	Sum	1		
A1.1.2.2.2.12	AH 14.1	Compliance with Occupational Health and Safety Act and Construction Regulations.	Sum	1		
CARRIED FORWARD						

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
BROUGHT FORWARD						
A1.1.2.2.2.13	AH 14.3	Submission of Health and Safety File	Sum	1		
A1.1.3	8.4 PSA 8.2.2	Time - Related Items				
A1.1.3.1		Contractual Requirements	Sum	1		
A1.1.3.2	8.4.2	Operate and maintain facilities on the Site:				
A1.1.3.2.1	PSA8.4.2.1	i) Facilities for Engineer for duration of construction (SABS 1200 AB)				
A1.1.3.2.1.1		a) Office buildings as per PSAB3.2.1	Sum	1		
A1.1.3.2.2		b) Car port (3 No.)	Sum	1		
A1.1.3.2.3	PSAB8.1	c) Cellphone calls and data costs	Prov.Sum	1	72 000.00	72 000.00
A1.1.3.2.4		d) Nameboards (2 No.)	Sum	1		
A1.1.3.2.5		e) Survey assistant and survey materials	Sum	1		
A1.1.3.2.6		f) Printer, scanner and copier	Sum	1		
A1.1.3.2.7	8.4.2.2	ii) Facilities for Contractor for duration of construction, except where otherwise stated				
A1.1.3.2.7.1		a) Offices and storage sheds	Sum	1		
A1.1.3.2.7.2		b) Workshops	Sum	1		
A1.1.3.2.7.3		c) Ablution and latrine facilities	Sum	1		
A1.1.3.2.7.4		d) Tools and equipment	Sum	1		
A1.1.3.2.7.5		e) Water supplies, electric power and communications	Sum	1		
A1.1.3.2.7.6		f) Dealing with water (Subclause 5.5)	Sum	1		
A1.1.3.2.7.7		g) Access (Subclause 5.8)	Sum	1		
A1.1.3.2.7.8		h) Plant	Sum	1		
A1.1.3.2.7.9	PSA8.4.3	Supervision	Sum	1		
A1.1.3.2.7.10	8.4.4	Company and head office overhead costs	Sum	1		
A1.1.3.2.7.11	8.4.5	Other time-related obligations	Sum	1		
CARRIED FORWARD						

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
BROUGHT FORWARD						
A1.1.3.2.7.12		Attendance on all other Contractors working on site.	Sum	1		
A1.1.3.2.7.13	AH 14.2	Compliance with Occupational Health and Safety Act and Construction Regulations.	Sum	1		
A1.1.3.2.7.14	PSA8.4.5	Provision of Site Security for duration of construction as per PS 11 and PSA 5.11.1	Sum	1		
A1.1.4	PSA8.5	Sums Stated Provisionally By Engineer				
A1.1.4.1		Allow for work to be undertaken by a nominated laboratory for additional check testing of materials as directed by the Engineer.	Prov Sum	1	25 000.00	25 000.00
A1.1.4.2		Overheads, charges and profit on item above	%			
A1.1.4.3		Allow for Community Liaison Officer.	Prov Sum	1	460 000.00	460 000.00
A1.1.4.4		Overheads, charges and profit on item above	%			
A1.1.4.5		Adjudication and Arbitration Fees	Prov Sum	1	25 000.00	25 000.00
	GCC 2015					
	CL 6.10					
A1.1.4.6		Overheads, charges and profit on item above	%			
A1.1.4.7		Professional services for Geotechnical Investigation as per Clause PS.14	Prov.Su m	1	375 000.00	375 000.00
A1.1.4.8		Overheads, charges and profit on item above	%			
A1.1.4.9		Independent Materials Management as per Clause PS.14	Prov.Su m	1 595 000.00	1.00	1 595 000.00
A1.1.4.10		Overheads, charges and profit on item above	%			
A1.1.4.11		Additional remediation measures as a result of geotechnical investigations and engineering redesign	Prov.Su m	1	1 500 000.00	1 500 000.00
A1.1.4.12		Overheads, charges and profit on item above	%			
A1.1.4.13		Allowance for incorporating recommendations arising from geotechnical investigations and engineering redesign into planning, programme and method statements	Prov.Su m	1	125 000.00	125 000.00
CARRIED FORWARD						

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
		BROUGHT FORWARD				
A1.1.4.14		Overheads, charges and profit on item above	%			
A1.1.4.15	PS 6.1	Attendance charges on installation of electrical infrastructure by eThekweni Electrical Department	Sum	1		
A1.1.5	SANS 1200 A 8.7	DAYWORKS				
A1.1.5.1		Labour				
A1.1.5.1.1		Skilled	hr	50		
A1.1.5.1.2		Semi-skilled	hr	100		
A1.1.5.1.3		Unskilled	hr	250		
A1.1.5.2		Materials				
A1.1.5.2.1		Materials	Prov.Sum	1	250 000.00	250 000.00
A1.1.5.2.2		Percentage allowance 1.1.5.2.1 for materials	%			
A1.1.5.2.3		Contractor's own Plant	Prov.Sum	1	100 000.00	100 000.00
A1.1.5.2.4		Plant hired by Contractor	Prov.Sum	1	100 000.00	100 000.00
A1.1.5.2.5		Percentage allowance to item 1.1.5.2.4 for Plant hired by Contractor only	%			
A1.1.6	8.8	Temporary Works				
A1.1.6.1	8.8.2	Accommodation of traffic as detailed in the Project Specification (PS 1.3.1), current Road Traffic Ordinance and Regulations, or as instructed by the Engineer.	Sum	1		
A1.1.6.2	PSA 8.8.5	Land Survey Act				
A1.1.6.2.1	PSAB 8.3	Complete As-Built Survey of works. Y, X & Z Co-Ordinates to be supplied in digital format of all surface features and services (eg. manholes, service markers, roads, buildings channels etc.)	Sum	1		
A1.1.6.2.2		Overheads, charges and profit on item 1.1.6.2.1	%			
A1.1.6.2.3		Supply all materials and erect 1,8m high diamond mesh fence with concrete posts and stays and three strand barbed wire topping.	m	-		Rate Only
CARRIED FORWARD						

ITEM	PAYMENT REFERS	DESCRIPTION	UNIT	QUANTITY	RATE R	AMOUNT R
A1.1.6.2.4		<p>BROUGHT FORWARD</p> <p>The continuous compilation of documentation for the submission of the eThekweni Pavement Material 'as built' Report.</p>	No.	1		
TOTAL FOR SECTION 1.1 CARRIED FORWARD TO SUMMARY						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
B1	SABS 1200C	SECTION B: INTERNAL AND OUTFALL GRAVITY SEWERS SITE CLEARANCE				
B1.1	PSC 8.2.1	Clear and grub 2 m wide strip along sewer pipe routes	km	30		
B1.2	PSC 8.2.2	Dismantle and remove large trees & stumps of girth: a) Over 1 m and up to and including 2 m b) Over 2 m and up to and including 3 m c) Over 3 m and up to and including 4 m	No	30		
B1.3	PSC 8.2.5	a) Take down and reinstate fence for access to sewer lines b) Temporary gates c) Permanent gates d) Fences along pipeline route	m No No m	10 1 2 10		
B1.4	PSC 8.2.8	Demolish and remove structures as indicated in drawings	Sum / panel	15		
B1.5	PSC 8.2.10	Remove and stockpile topsoil	m ³	6450		
B2	SABS 1200D	EARTHWORKS				
B2.2	PSD 8.3.2	Bulk Excavation a) Excavate in all materials to form bench and use for embankment as indicated by the Engineer on-site				
B2.2.1		(a) Necessary excavations (b) Designated borrow pits (c) Commercial Sources	m ³ m ³ m ³	100 100 100		
B2.2.2	PSD 8.3.2 b	Extra over PSD 8.3.2 for excavation (i) Hard rock excavation (ii) Boulder excavation, Class A (ii) Boulder excavation, Class B	m ³ m ³ m ³	100 100 100		
B2.3	PSD 8.3.4	Importing of Materials Importation of materials from for fill irrespective of source	m ³	300		
B2.3.1						
B2.3.2	PSD 8.3.8	Existing Services				
B2.3.3	PSD 8.3.8.1	Hand excavation for locating and exposing existing services (a) In roadways (b) In all other areas	m ³ m ³			Rate Only Rate Only
B2.3.4	PSD 8.3.9a	Extra over for Backfill or for fill material against or under structures	m ³			Rate Only
B2.3.5	PSD 8.3.9b	Extra over for backfill or fill material not meeting requirements	m ³			Rate Only
TOTAL CARRIED FORWARD						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD						
B2	SABS 1200DB	EARTHWORKS (pipe trenches)				
B2.1	PSDB 8.3.2	a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material for sewers				
B2.1.1		160 mm dia pipe for depths: OVER - UP TO				
B2.1.1.1		0,0 m - 1,5 m	m	8400		
B2.1.1.2		1,5 m - 2,0 m	m	4200		
B2.1.1.3		2,0 m - 3,0 m	m	4200		
B2.1.2.4		3,0 m - 4,0 m	m	2100		
B2.1.2.5		4,0 m - 5,0 m	m	2100		
B2.1.2.6		5,0 m - 5,5 m	m	100		
B2.1.2		110 mm dia pipe for depths: OVER - UP TO				
B2.1.2.1		0,0 m - 1,5 m	m	2400		
B2.1.2.2		1,5 m - 2,0 m	m	2400		
B2.1.2.3		2,0 m - 3,0 m	m	1200		
B2.2	PSDB 8.3.2	b) Extra-over Item (a) above for: 2) Hard rock	m ³	3645		
		3) Boulder excavation Class A	m ³			Rate Only
		4) Boulder excavation Class B	m ³			Rate Only
B2.3		5) Hand excavation and backfill where ordered by the Engineer	m ³	100		
		6) Backfill stabilised with 5% cement where ordered by the Engineer	m ³			Rate Only
B2.5	PSDB 8.3.3.1	Make up deficiency in backfill material (provisional): a) From other necessary excavations on site	m ³	1000		
		c) By importation from commercial or off-site sources selected by the Contractor	m ³	100		
B2.7	PSDB 8.3.3.4	Overhaul to dispose hard rock material	m ³ /km	100		
	PSDB 8.3.4	Cross Embankments	m ³	30		
B2.8	PSD 8.3.5	Existing services that intersect or adjoin a trench a) Services that intersect a trench	No	120		
		b) Services that adjoin a trench	m	2500		
TOTAL CARRIED FORWARD						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
B3	SABS 1200LB	BROUGHT FORWARD BEDDING				
B3.1	PSLB 8.2.1	Provision of bedding from trench excavations on-site.				
		a) Selected granular material	m ³	500		
		b) Selected fill material (blanket)	m ³	2000		
B3.2	PSLB 8.2.2	Provision of bedding by importation				
		a) Selected granular material	m ³	1500		
		b) Selected fill material (blanket)	m ³	10000		
B3.3	PSLB 8.2.3	Bedding Concrete Cradle	m ³	1		
B3.4	PSLB 8.2.4	Encasing of pipes in concrete 20MPa where ordered by the Engineer				
		a) 110 mm dia	m ³	50		
		b) 160 mm dia	m ³	50		
B3.5	PSLB 8.2.6	Drainage Layer	m ³	1000		
		a) 19mm crushed stone	m ³	500		
		b) Geotextile Grade 4 filter surround	m ²	120		
		Soilcrete with 4% cement	m ³	10		
B4	SABS 1200LD	PIPELAYING FOR SEWERS				
B4.2	PSLD 8.2.1	Supply, lay, joint and test Class 34 heavy duty or similar approved pipes of the following nominal diameters				
B4.2.1		a) 110 mm dia	m	6000		
B4.2.2		b) 160 mm dia	m	19000		
B4.2.4	PSLD 8.2.2	Extra over item PSLD 8.2.1 for the supply, handle, lay, joint and bed 110 dia 90 degree bends with inspection eyes.	No	1137		
B4.2.6	PSLD 8.2.2	Extra over item PSLD 8.2.1 for the supply, handle, connect and bed 110 rodding eyes as per Drawing S011	No	2274		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
B4.3	PSLD 8.2.3	BROUGHT FORWARD Supply, handle and construct precast concrete sewer manholes complete as per Drawing S011 and S012, including "Medium Duty" concrete access cover and frame				
B4.3.1		Over 0,0 m up to 1,5 m	No	283		
B4.3.2		Over 1,5 m up to 2,0 m	No	64		
B4.3.3		Over 2,0 m up to 3,0 m	No	22		
B4.3.4		Over 3,0 m up to 4,0 m	No	3		
B4.3.5		Over 4,0 m up to 5,0 m	No	2		
B4.3.6		Over 5,0 m up to 6,0 m	No	1		
B4.3.7		Extra over items PSD 8.2.3 for type "Heavy Duty" concrete manhole covers in lieu of "Medium Duty"	No	200		
B4.4	PSLD 8.2.5	Supply, handle, construct and connect precast inspection chambers, complete with concrete lids. Complete as per Drawing S013 for the following depths.				
		a) 0.5m - 1m	No	560		
		b) 1m - 1.5m	No	203		
		c) depth over 1.5m	No	20		
B4.6	PSLD 8.2.6	Supply, handle, connect and bed 110 dia uPVC erf connection as detailed on Drawing S012 complete for the following types:	No			
		a) Type 1	No	240		
		b) Type 2	No	240		
		c) Type 3	No	160		
		d) Type 4	No	160		
		e) Type 5	No	50		
B4.7	8.2.8	ANCHOR BLOCKS Construct anchor blocks on slopes of 1 : 10 or steeper, at 2 m vertical intervals along sewer line.	No	1000		
B4.8	8.2.9	Marker Blocks	No	1137		
B4.9	PSLD 8.2.11	Connection to existing sewer	No	30		
B4.10	PSLD 8.2.12	Watertightness of manholes	No	300		
		TOTAL SECTION B CARRY FORWARD TO SUMMARY				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
C1	SABS 1200C	SECTION C: INTERNAL WATER MAINS SITE CLEARANCE				
C1.1	PSC 8.2.1	Clear and grub 2 m wide strip along water pipe routes.	km	9		
C1.2	PSC 8.2.2	Dismantle and remove large trees & stumps of girth:				
		a) Over 1 m and up to and including 2 m	No	30		
		b) Over 2 m and up to and including 3 m	No	10		
		c) Over 3 m and up to and including 4 m	No	10		
C1.3	PSC 8.2.5	a) Take down and reinstate fence for access	m	10		
		b) Temporary gates	No	2		
		c) Permanent gates	No	1		
		d) Fences along pipeline route	m	10		
C1.4	PSC 8.2.10	Remove and stockpile topsoil	m ²	2850		
C2	SABS 1200D	EARTHWORKS				
C2.2	PSD 8.3.2	Bulk Excavation				
C2.2.1		a) Excavate in all materials to form bench and use for embankment as indicated by the Engineer on-site				
		(a) Necessary excavations	m ³	100		
		(b) Designated borrow pits	m ³	100		
		(c) Commercial Sources	m ³	100		
C2.2.2	PSD 8.3.2 b	Extra over PSD 8.3.2 for excavation				
		(i) Hard rock excavation	m ³	100		
		(ii) Boulder excavation, Class A	m ³	100		
		(ii) Boulder excavation, Class B	m ³	100		
C2.3	PSD 8.3.4	Importing of Materials				
C2.3.1		Importation of materials from for fill irrespective of source	m ³	300		
C2.3.2	PSD 8.3.8	Existing Services				
C2.3.2	PSD 8.3.8.1	Hand excavation for locating and exposing existing services				
		(a) In roadways	m ³			Rate Only
		(b) In all other areas	m ³			Rate Only
C2.3.3	PSD 8.3.9a	Extra over for Backfill or for fill material against or under structures	m ³			Rate Only
C2.3.4	PSD 8.3.9b	Extra over for backfill or fill material not meeting requirements	m ³			Rate Only
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD						
C3	SABS 1200DB	EARTHWORKS (pipe trenches)				
C3.1	PSDB 8.3.2	a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material for water mains trench between 600 mm wide and 800mm				
C3.1.1		160 mm dia pipe for depths OVER - UP TO				
C3.1.1.1		0,0 m - 1,5 m	m	781		
C3.1.1.2		1,5 m - 2,0 m	m	41		
C3.1.1.3		2,0 m - 3,0 m	m			Rate Only
C3.1.2		110 mm dia pipe for depths OVER - UP TO				
C3.1.2.1		0,0 m - 1,5 m	m	7635		
C3.1.2.2		1,5 m - 2,0 m	m	40		
C3.1.2.3		2,0 m - 3,0 m	m			Rate Only
C3.1.3		75 mm dia pipe for depths OVER - UP TO				
C3.1.3.1		0,0 m - 1,5 m	m	616		
C3.1.3.2		1,5 m - 2,0 m	m	32		
C3.1.3.3		2,0 m - 3,0 m	m			Rate Only
C3.2	PSDB 8.3.2	b) Extra-over Item (a) above for:				
C3.2.1		2) Hard rock	m ³	3645		
C3.2.2		3) Boulder excavation Class A	m ³			Rate Only
C3.2.3		4) Boulder excavation Class B	m ³			Rate Only
C3.2.4		5) Hand excavation and backfill where ordered by the Engineer	m ³	100		
C3.2.5		6) Backfill stabilised with 5% cement where ordered by the Engineer	m ³			Rate Only
C3.3	PSDB 8.3.3.1	Make up deficiency in backfill material (provisional):				
C3.3.1		a) From other necessary excavations on site	m ³	1000		
C3.3.2		c) By importation from commercial or off-site sources selected by the Contractor	m ³	100		
C3.4	PSDB 8.3.3.4	Overhaul to dispose hard rock material	m ³ /km	100		
C3.5	PSDB 8.3.4	Cross Embankments	m ³	30		
C3.6	PSD 8.3.5	Existing services that intersect or adjoin a trench				
C3.6.1		a) Services that intersect a trench	No	120		
C3.6.2		b) Services that adjoin a trench	m	2500		
TOTAL CARRIED FORWARD						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
C3	SABS 1200LB	BROUGHT FORWARD				
		BEDDING				
C3.1	PSLB 8.2.1	Provision of bedding from trench excavations on-site.				
		a) Selected granular material	m ³	20		
		b) Selected fill material (blanket)	m ³	20		
C3.2	PSLB 8.2.2	Provision of bedding by importation				
		a) Selected granular material	m ³	800		
		b) Selected fill material (blanket)	m ³	7000		
C3.3	PSLB 8.2.3	Bedding Concrete Cradle	m ³	10		
C3.4	PSLB 8.2.4	Encasing of pipes in concrete 20MPa where ordered by the Engineer				
		a) 110 mm dia	m ³	50		
		b) 160 mm dia	m ³	50		
C3.5	PSLB 8.2.6	Drainage Layer	m ³	1000		
		a) 19mm crushed stone	m ³	500		
		b) Geotextile Grade 4 filter surround	m ²	120		
		Soilcret with 4% cement	m ³	10		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
C4	SABS 1200 L	MEDIUM PRESSURE PIPELINES				
C4.1	PSL 8.2.1	Supply, lay, joint, bed (flexible pipes), test and disinfect – Class 12 mPVC or similar approved pipes of the following nominal diameters				
C4.1.1		160 mm dia	m	822		
C4.1.2		110 mm dia	m	8037		
C4.1.3		75 mm dia	m	648		
C4.2	8.2.2	Extra over PSL 8.2.1 for the supply, laying and bedding of the following specials and fittings				
C4.2.1	8.2.2	Bends mPVC or simialr approved with lynng coupling				
C4.2.1.1		a) 160 mm dia 90 degree	No	5		
C4.2.1.2		b) 160 mm dia 45 degree	No	5		
C4.2.1.3		c) 160 mm dia 22,5 degree	No	5		
C4.2.1.4		d) 160 mm dia 11,25 degree	No	5		
C4.2.1.5		a) 110 mm dia 90 degree	No	9		
C4.2.1.6		b) 110 mm dia 45 degree	No	34		
C4.2.1.7		c) 110 mm dia 22,5 degree	No	33		
C4.2.1.8		d) 110 mm dia 11,25 degree	No	45		
C4.2.1.9		e) 75 mm dia 90 degree	No	1		
C4.2.1.10		f) 75 mm dia 45 degree	No	5		
C4.2.1.11		g) 75 mm dia 22,5 degree	No	10		
C4.2.1.12		h) 75 mm dia 11,25 degree	No	15		
C4.2.2	8.2.2	Reducers Cast iron, socket ends for mPVC				
C4.2.2.1		a) 200 mm / 160 mm	No	2		
C4.2.2.2		a) 200 mm / 110 mm	No	2		
C4.2.2.3		b) 160 mm / 110 mm	No	2		
C4.2.2.4		c) 160 mm / 75 mm	No	2		
C4.2.2.5		d) 110 mm / 75 mm	No	3		
C4.2.3	8.2.2	Equal Tees. Cast iron, socket ends for mPVC				
C4.2.3.1		a) 200mm/200mm/200mm	No	3		
C4.2.3.2		b) 160mm/160mm/160mm	No	3		
C4.2.3.3		b) 110mm/110mm/110mm	No	20		
C4.2.3.4		c) 75mm/75mm/75mm	No	2		
C4.2.4	8.2.2	Reducer Tees Cast iron, socket ends for mPVC				
C4.2.4.1		a) 160mm/160mm/110mm	No	6		
C4.2.4.2		b) 110mm/110mm/75mm	No	23		
C4.2.4.3		c) 160mm/160mm/110mm	No	5		
C4.2.4.4		d) 200mm/200mm/160mm	No	5		
C4.2.4.5		e) 200mm/200mm/110mm	No	5		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
C4.2.5		Repair coupling, socket ends				
C4.2.5.1		160mm dia	No	8		
C4.2.5.2		110mm dia	No	30		
C4.2.5.3		75mm dia	No	6		
C4.2.6		End Caps (Cast iron)				
C4.2.6.1		110mm	No	11		
C4.2.6.2		75mm	No	2		
C4.2.7		Flange adaptors for mPVC pipes				
C5.2.7.1		160mm dia	No	10		
C5.2.7.2		110mm dia	No	10		
C5.2.7.3		75mm dia	No	10		
C4.2.8	PSL 8.1.17	Tie-in to existing bulk water mains				
C4.2.8.1		a) 200/200/160	No	2		
C4.2.8.2		b) 200/200/110	No	2		
C4.2.8.3		c) 200/110	No	1		
C4.2.8.4		d) 110/110	No	1		
C5	SABS 1200 L	Fire Hydrants				
C5.1	8.2.3 and PSL 3.10	Extra over PSL 8.2.1 for the supply, fixing, building-in, testing and disinfecting of fire hydrants complete including the tee with 80mm n.b flanged branch for the following diameters:				
C5.1.1		a) 75mm o.d SG iron socket ended	No	2		
C5.1.2		b) 110mm o.d SG iron socket ended	No	30		
C5.1.3		c) 160mm o.d SG iron socket ended	No	4		
C5.2		Double flanged hydrant extension pieces of either cast iron or HDPE				
C5.2.1		a) 150 mm length	No			Rate Only
C5.2.2		b) 300 mm length	No			Rate Only
C5.2.3		c) 450 mm length	No			Rate Only
C5.2.4		d) 600 mm length	No			Rate Only
C5.3		Marker Posts for Fire Hydrants	No	34		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
C6	SABS 1200 L	Valves				
C6.1	8.2.3	Extra over PSL 8.2.1 for the supply, fixing, building-in, testing and disinfecting of valves and fittings for outside diameter stated below				
C6.1.1		a) 200 mm dia C.I. socket ended gate valve	No	2		
C6.1.2		b) 160 mm dia C.I. socket ended gate valve	No	2		
C6.1.3		c) 110 mm dia C.I. socket ended gate valve	No	57		
C6.1.4		d) 75 mm dia C.I. socket ended gate valve	No	8		
C6.1.5	8.2.11	Anchor/thrust blocks and pedestals to dimensions shown on Drawing W101				
C6.1.5.1		a) Thrust blocks at bends. Pipe diameter greater than 100mm dia	No	10		
		b) Thrust blocks at bends. Pipe diameter less than 100mm dia.	No	130		
C6.1.5.2		c) Thrust blocks at tees. Pipe diameter greater than 100mm dia	No	25		
		d) Thrust blocks at tees. Pipe diameter less than 100mm dia	No	25		
				5		
C6.1.5.3		e) Pedestals under valves and hydrants. Pipe diameter greater than 100mm dia	No	43		
		f) Pedestals under valves and hydrants. Pipe diameter less than 100mm dia	No			
C6.1.6	8.2.13	Precast concrete chambers complete as per drawing W102 for the fire hydrants and valves	No	95		
C6.1.7		Marker Posts for valves	No	61		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
C7	PSL 8.2.1	Supply, lay, joint, bed, test and disinfect – Class 2 Polycop or similar approved pipes of the following outside diameters				
C7.1		50 mm	m			Rate Only
C7.2		40 mm	m			Rate Only
C7.3		32 mm	m			Rate Only
C7.4		28 mm	m			Rate Only
C7.5		22 mm	m			Rate Only
C7.6	8.2.2	Extra over item PSL 8.2.1 for the supply, laying, bedding, test and disinfecting of the following specials (brass compression fittings conex type or similar approved)				
		Male thread adapters				
C7.6.1		50/2"	No			Rate Only
C7.6.1.1		40/1½"	No			Rate Only
C7.6.1.2		32/1¼"	No			Rate Only
C7.6.1.3		28/1"	No			Rate Only
C7.6.1.4		28/¾"	No			Rate Only
C7.6.1.5		22/¾"	No			Rate Only
C7.6.1.6			No			Rate Only
		Female threaded tee				
C7.6.2		40/40/¾"	No			Rate Only
C7.6.2.1		32/32/¾"	No			Rate Only
C7.6.2.2		28/28/¾"	No			Rate Only
C7.6.2.3		22/22/¾"	No			Rate Only
C7.6.2.4			No			Rate Only
		End Caps				
C7.6.3		50 mm	No			Rate Only
C7.6.3.1		40 mm	No			Rate Only
C7.6.3.2		32 mm	No			Rate Only
C7.6.3.3		28 mm	No			Rate Only
C7.6.3.4		22 mm	No			Rate Only
C7.6.3.5			No			Rate Only
		Reducer Coupling				
C7.6.4		50/40	No			Rate Only
C7.6.4.1		50/32	No			Rate Only
C7.6.4.2		40/32	No			Rate Only
C7.6.4.3		32/28	No			Rate Only
C7.6.4.4		28/22	No			Rate Only
C7.6.4.5		22/15	No			Rate Only
C7.6.4.6			No			Rate Only
		Tees				
C7.6.5		50/50/50	No			Rate Only
C7.6.5.1		40/40/40	No			Rate Only
C7.6.5.2			No			Rate Only
		Reducer Tees				
C7.6.6		50/50/40	No			Rate Only
C7.6.6.1		40/40/32	No			Rate Only
C7.6.6.2			No			Rate Only
C8	8.2.3	Extra over PSL 8.2.1 for the supply, fixing, building-in, testing and disinfecting of valves and fittings for the following diameters				
C8.1		a) 50 mm dia Brass gate valve	No			Rate Only
C8.2		b) 40 mm dia Brass gate valve	No			Rate Only
C8.3		c) 32 mm dia Brass gate valve	No			Rate Only
C8.4		d) 28 mm dia Brass gate valve	No			Rate Only
C8.5		e) 22 mm dia Brass gate valve	No			Rate Only
TOTAL SECTION C CARRY FORWARD TO SUMMARY						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
SECTION D: ERF CONNECTIONS AND DOMESTIC WATER METERS						
D1	SABS 1200DB	EXCAVATION				
D1.1	PSDB 8.3.2(a)	Excavate in all materials for leading connections and meter installation, including backfill and disposal of surplus material	m ³	1000		
D1.2		Compaction below concrete footing as detailed on Drawing W104	m ³	250		
D2	SABS 1200 LF	WATER CONNECTIONS				
D2.4	PSLF 8.2.1	Supply and install quadruple long erf connections complete with all fittings as detailed on Drawing W103 & W104	No	100		
D2.4	PSLF 8.2.1	Supply and install double long erf connections complete with all fittings as detailed on Drawing W103 & W104	No	50		
D2.5	PSLF 8.2.1	Supply and install double short erf connection complete with all fittings as detailed on Drawing W103	No	280		
D2.6	PSLF 8.2.1	Supply and install single short erf connection complete with all fittings as detailed on Drawing W104	No	46		
D2.7	PSLF 8.2.1	Supply and install single long erf connection complete with all fittings as detailed on Drawing W103 & W104	No	31		
D2.8	PSLF 8.2.3	Extra over for ball cock. Complete as detailed on Drawing W104 for 22mm dia connections	No	31		
D2.9	PSLF 8.2.3	Extra over for ball cock. Complete as detailed on Drawing W104 for 28mm dia connections	No	50		
	PSLF 8.2.3	Extra over for ball cock. Complete as detailed on Drawing W104 for 40mm dia connections	No	100		
	PSLF 8.2.3	Extra over for saddles complete with fittings for the following diameters				
		a) 160 mm	No	35		
		b) 110 mm	No	405		
		c) 75mm	No	25		
D2.10	PSLF 8.2.4	Supply a Plastic Bodied Meter (Water Domestic) semi positive/inferential straight reading metric meters" . Connections to be non metallic push-fit type. The water meter to be in accordance with SABS 1529	No	1137		
D2.11	PSLF 8.2.4	Remove existing end caps and store	No	800		
D2.12	PSLF 8.2.7	Supply and install precast concrete meter box complete as per Drawing W105	No	1137		
TOTAL SECTION D CARRY FORWARD TO SUMMARY						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
SECTION E : INTERNAL ROADS AND STORMWATER						
E1	SABS 1200 C	SITE CLEARANCE				
E1.1	PSC 8.2.1	Clear and grub road reserves for the following widths a) 6m reserve b) 8m reserve c) 10,5m reserve	ha ha ha	0,1 2,5 4,9		
E1.2	PSC 8.2.1	Extra and over E1.1 for additional clearing of reserves	ha	1,6		
E1.3	PSC 8.2.2	Dismantle and remove large trees & stumps of girth: a) Over 1 m and up to and including 2 m b) Over 2 m and up to and including 3 m c) Over 3 m and up to and including 4 m	No No No	300 50 50		
E1.4	PSC 8.2.10	Remove and stockpile topsoil	m ²			
E2	SABS 1200 DM	ROADWORKS				
E2.2	8.3.3	Roadbed preparation to 300 mm depth compacting to 91% Mod AASHTO density	m ³	22800		
E2.3	8.3.3	Extra over item E.2.2 for compaction to 93% Mod AASHTO density	m ³	22800		
E2.4	PSDM 8.3.4	Cut to fill, including haul up to 3 km and compaction to 90% Mod AASHTO density	m ³	5016		
E2.5	PSDM 8.3.4	Borrow to fill from: a) stockpile b) Commercial Source	m ³ m ³	6840 15960		
E.2.6	PSDM 8.3.4	Extra over item E2.4 - E2.5 for compaction to 93% Mod AASHTO density	m ³	27816		
E.2.7	8.3.7	Cut to spoil including haul up to 2,0 km	m ³	5016		
E.2.8	8.3.7	Extra over items E.2.4 and E2.6 for excavation in : a) Intermediate material b) Hard rock material	m ³ m ³	16689,6 5563,3		
E.2.9	8.3.12	Overhaul in excess of 2 km	m ³ /km	400000		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD						
E3	SABS 1200 ME	SELECTED LAYER				
E3.1	8.3.3	Construct the selected subgrade with natural (G7) material compacted to 93% Mod AASHTO maximum density in 150 mm layers.	m ³	11280		
E3.2	8.3.3	Import crushed G5 subbase course (max stone size 38 mm) from commercial sources and compact to 95% Mod AASHTO density in 150mm layers.	m ³	11280		
E3.3	8.3.5	Process subbase by stabilizing with stabilizing agent (road lime (4%))	m ³	3600		
E3.4	8.3.8	Supply stabilization agent (road lime)	t	451		
E3.5	8.3.8	Process subbase by mechanical modification (blending)	m ³	3600		
E3.6	8.3.1	Extra over item 8.3.3 for compaction to 98% Mod AASHTO density	m ³	22560		
E4	SABS 1200 MF	BASE				
E4.1	8.3.3	Import natural G2 selected material from commercial sources and compact to 95% Mod. AASHTO maximum density in 150 mm layers.	m ³	1280		
E4.2	8.3.1	Extra over item E5.1 for compaction to 98% Mod AASHTO density	m ³	1280		
E6	SABS 1200 MH	ASPHALT SURFACING				
E6.1	8.5.1	Prime Coat MC 30 cut back bitumen application rate 0,7l/m ² .	m ²	75200		
E6.2	8.5.3	Tack Coat 30% stable-grade emulsion	m ²	75200		
E6.3	PSMH 8.5.4	Asphalt Continuously graded 40mm thick				
E6.3.1		Binder to be 40/50 pen. Road grade 24	m ²	75200		
E7	SABS 1200 DM	FINISHING				
E7.1	8.3.12	Finishing of road and road reserves	km	8		
E8	SABS 1200 MM	ROAD SIGNS				
E8.1	8.3.1	Sign faces as per Department of Transport Regulatory sign No R1 (L = 450)	No	50		
E8.2	8.3.3	Sign supports as per Department of Transport	No	100		
E8.3	8.3.4	Excavation, backfilling and concreting for sign support	m ³	220		
TOTAL CARRIED FORWARD						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
E9.4	COLTO 5700	ROAD MARKINGS				
E9.4.1	57,01	a) White lines, broken or unbroken (100mm wide)	km	9		
		b) Yellow lines, broken or unbroken (100mm wide)	km	5		
		c) White characters and symbols	m ²	100		
		d) Yellow characters and symbols	m ²	80		
	57,06	Setting out and pre-marking lines	km	14		
E9.5	COLTO 5400	GUARDRAILS				
	54,03	Guardrails on timber posts				
		a) Galvanised	m	4000		
	54,04	End treatments				
		b) Bull noses	No	35		
	54,05	Additional guardrail posts:				
		a) timber	No	800		
	54,06	Reflective plates	No	500		
	54,12	Extra over Item 54.01 for drilling and blasting holes for guardrail posts:	No	120		
E10		STORMWATER DRAINAGE				
E10.1	SABS 1200D	Open drains excavation				
E10.1.3	8.3.3 (a)	Trimming of excavations for concrete-lined dish drains in				
		a) Soft material	m ²	12000		
		b) Intermediate material	m ²	2400		
E10.2	SABS 1200GA	Open drains concrete				
E10.2.1		Open drains (Formwork)				
	8.2.1 (b)	To sides for open drains	m ²	1200		
	8.2.1 (c)	To end of slabs	m ³	500		
E10.2.2	8.4.3	Cast in-situ strength concrete – 25 Mpa to open drains including formwork	m ³	1800		
E10.2.3	8.3.2	Extra over for item E10.2.2 for steel reinforcement Mesh Ref 500	m ²	12000		
E10.2.4	8.4.3	Wood Floated Finish	m ²	12000		
E10.2.5	8,5	Trowel cut joints 25 mm deep at intervals not exceeding 2,5 m in concrete lining of open drains	m	3200		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
E11	SABS 1200LE	BROUGHT FORWARD				
	SABS 1200DB	STORMWATER DRAINAGE				
E11.1	8.3.2(a)	EARTHWORKS (pipe trenches) Excavate in all materials for trenches, backfill by hand and dispose of surplus/unsuitable materials for pipes 450 to 1050 mm nominal diameter Over and Up to				
E11.1.1		0.0 m 1.0 m	m			Rate Only
E11.1.2		1.0 m 2.0 m	m			Rate Only
E11.1.3		2.0 m 3.0 m	m			Rate Only
E11.1.4		3.0 m 4.0 m	m			Rate Only
E11.1.5		4.0 m 5.0 m	m			Rate Only
E11.1.6		5.0 m 6.0 m	m			Rate Only
E11.1.7	PSDB 8.3.2 8.3.2b)	Extra-over items 9.1.1.1 to 9.1.1.6 for excavation in: (Provisional quantities) 2) Hard rock excavation	m ³	4000		
E11.1.8	8.3.2c)	Excavate and dispose of unsuitable material in trench bottom (prov.)	m ³	2100		
E11.1.9		Make up deficiency in backfill material a) From other excavations on site	m ³	920		
E11.2	SANS 1200LE 8.2.1	PIPES Supply, handle, lay and bed as Class B concrete pipes, spigot and socket joints and rubber rings				
E11.2.1		450 mm dia Class 100-D	m			Rate Only
E11.2.2		600 mm dia Class 100-D	m	2286		
E11.2.3		750 mm dia Class 100-D	m	901		
E11.2.4		900 mm dia Class 100-D	m	292		
E11.2.5		1050 mm dia Class 100-D	m	58		
E11.3	SANS 1200 LB PSLB 8.2.2.3	PROVISION OF BEDDING Supply of bedding by importation from commercial sources				
E11.3.1	(a)	Selected granular material	m ³	371		
E11.3.2	(b)	Selected fill material	m ³	150		
E11.4	1200 LE PS LE 8.2.8	MANHOLES Construct manholes complete to eThekweni Municipality standard Drawing No. 38751 with Heavy Duty manhole covers and frames for depths: Over and Up to				
E11.4.1		0.0 m 1.0 m	m			Rate Only
E11.4.2		1.0 m 2.0 m	m			Rate Only
E11.4.3		2.0 m 3.0 m	m			Rate Only
E11.4.4		3.0 m 4.0 m	m			Rate Only
E11.4.5		4.0 m 5.0 m	m			Rate Only
E11.4.6		5.0 m 6.0 m	m			Rate Only
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		BROUGHT FORWARD				
E11.5	PS LE 8.2.8	CATCHPITS Construct Type S2 Inlet complete to eThekweni Municipality standard Drawing No. 38752 and 38753 with covers and frames for depths: Over and Up to				
E11.5.1		0.0 m 1.0 m	m			Rate Only
E11.5.2		1.0 m 2.0 m	m			Rate Only
E11.5.3		2.0 m 3.0 m	m			Rate Only
E11.5.4		3.0 m 4.0 m	m			Rate Only
E11.5.5		4.0 m 5.0 m	m			Rate Only
	PS LE 8.2.8	Construct Type S4 Inlet complete to eThekweni Municipality standard Drawing No. 38752 and 38753 with covers and frames for depths: Over and Up to				
E11.5.6		0.0 m 1.0 m	m			Rate Only
E11.5.7		1.0 m 2.0 m	m			Rate Only
E11.5.8		2.0 m 3.0 m	m			Rate Only
E11.5.9		3.0 m 4.0 m	m			Rate Only
E11.6	8.2.7	HEADWALLS Construct outlet headwalls complete to eThekweni Municipality standard Drawing No. 38756, including excavation, backfilling and compaction :				
E11.6.1		450mm dia Headwall	No			Rate Only
E11.6.2		1350mm dia Headwall	No			Rate Only
E11.7	1200 LE 8.2.2	BOX CULVERTS Supply, handle, lay, provision of bedding and jointed with U24 geofabric incl. precast base slabs a) complete with invert slabs				
E11.7.1		3000mm x 1800mm	m			Rate Only
E11.7.2		Extra-over item E11.7.1 for cutting ends of skew pipes (prov.) Skew cut greater than 20 degrees	No			Rate Only
E11.8		TRAPEZOIDAL CHANNEL Construct Cut-off Channel structures lined with Armourflex 140, installed on a Grade A5 Bidim or similar geotextile in accordance with manufacturers specifications complete.				
E11.8.1		3450x750mm at 1:3 Side Slopes	m	207		
E11.8.2		8600 x 900mm at 1:3 Side Slopes	m			Rate Only
E11.9	8.3.10	FINISHINGS Embankment Topsoiling Local vegetation	m ² m ²	93,15 93,15		
E11.10	PSLE 8.2.14	SUBSOIL DRAINS (PROVISIONAL) Excavate in all materials for trenches, backfill, compact and dispose of surplus/unsuitable materials for subsoil drains of depth Over and Up to				
E11.10.1		0.00 m 1.00 m	m	4000		
		TOTAL CARRIED FORWARD				

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
BROUGHT FORWARD						
E11	COLTO 7100	CONCRETE PAVEMENTS				
E11.1	71,02	Concrete Pavement 100mm thick	m ³	720		
E11.2	71,04	Texturing and curing the pavement				
		a) Burlap dragged and grooved texture	m ²	7200		
		b) curing	m ²	7200		
E11.3		Unsealed sawn contraction joints	m	1500		
E11.4		Steel reinforcement in concrete pavement				
		c) Welded steel fabric # 500	t	1000		
E12	COLTO 2100	SUBSOIL DRAINAGE				
E12.1	21,03	Excavation for subsoil drainage systems				
		(a) Excavating soft material situated within the following depth ranges below the surface level				
		(i) 0 m up to 1.5m	m ³	5400		
		(b) Extra over subitem 21.03(a)(i) for excavation in hard material irrespective of depth	m ³	540		
E12.2	21,06	Natural permeable material in subsoil drainage systems (crushed stone)				
		(b) 19mm crushed stone from commercial source	m ³	920		
E12.3	21,08	Pipes in subsoil drainage systems				
		(b) 100 dia uPVC perforated pipe and fittings, normal duty, complete with couplings	m	5200		
E12.4	21,10	Synthetic-fibre filter fabric				
		(a) U24 Kaymat geofabric or equal approved	m ²	36000		
E12.5	21,12	Concrete Outlet Structures, manhole boxes, junction boxes and cleaning eyes for subsoil drains complete as per Drawings SW011				
		a) Outlet Structures	No			Rate Only
		b) Manhole Boxes	No			Rate Only
		c) Junction Boxes	No			Rate Only
		d) Cleaning Eyes	No			Rate Only
E13	SABS 1200 D	EROSION PROTECTIONS				
E13.1	8.3.3 (a)	Excavations for gabion mattresses to net outline of structure	m ³	500		
E14	SABS 1200 DK	GABIONS				
E14.1	8.2.1	Surface preparation for bedding of gabion mattress	m ²	750		
E14.2	8.2.2	Gabion mattress formed of galvanised wire, 2m x 1m x 0,3 m	m ³	1500		
E14.3	8.2.3	Extra over for packing selected stone for exposed face	m ²	500		
E14.4	8.2.4	Kaymat Geotextile fabric U24 or equal approved	m ²	500		
TOTAL CARRIED FORWARD						

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
E15	SABS 1200MK	BROUGHT FORWARD				
E15.1	8.2.2	KERBING and CHANNELLING Concrete Kerbing and Channelling combined				
E15.1.1		a) (i) Figure 8d precast mountable kerb as detailed in the drawing for curvatures (including necessary excavation, compacting bedding & backfilling, supporting kerbs and filling all joints.)				
		Exceeding 20m	m	16000		
		Straights	m	6000		
E15.1.2		a) (ii) Figure 7 as detailed in the drawing for curvatures (including necessary excavation, compacting bedding & backfilling, supporting kerbs and filling all joints.)				
		Exceeding 20m	m	16000		
		Straights	m	6000		
E15.1.3		a) (iii) Precast barrier kerb and channel as detailed in the drawing for curvatures (including necessary excavation, compacting bedding & backfilling, supporting kerbs and filling all joints.)				
		Exceeding 20m	m	1000		
		Straights	m	2500		
E15.1.4	8.2.4	Depressed kerbs	m			
E15.1.5	8.2.5	Precast concrete chutes (1000 long) excavation, bedding preparation and backfill as per Drawing SW011	m	4000		
		Inlet, outlet transition structures for chutes	No	100		
		Concrete screed or backfill below chutes to Grade 20/19	m ³	2000		
E15.1.6	8.2.6	Ancilleries				
		2m long mountable kerb and channel to edge strip transitionas detailed on drawings	m			Rate Only
		2m long transition from edge strip to barrier kerb as detailed on drawings	m			Rate Only
		TOTAL SECTION E CARRY FORWARD TO SUMMARY				

ETHEKWINI MUNICIPALITY

HUMAN SETTLEMENTS HOUSING UNIT

CONTRACT NO.: xxxxxxxxxxxxxxxxxxxx

SUMMARY OF SCHEDULE OF QUANTITIES

Description	Amount
Section A: Preliminary and General	
Section B: Internal and Outfall Gravity Sewers	
Section C: Internal Water Mains	
Section D: Erf Connections and Domestic Water Meters	
Section E: Internal Roads and Stormwater	
Sub-total (1)	
Add Contingencies (10%)	
Sub-total (2)	
Add 15% VAT to Sub-total (3)	
TOTAL VALUE OF TENDER (carry to Form of Offer)	

.....
DATE

.....
SIGNATURE

PART C3: SCOPE OF WORK

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C3.1: PROJECT DESCRIPTION AND SCOPE OF CONTRACT

C3.1.1 Employer's Objectives

eThekwini Human Settlements unit intends appointing a Contractor to carry out the work for the construction of engineering services for the Umlazi S1, S2 & S3 housing project. The extents of which are shown in the diagram under C3.1.2. eThekwini Human Settlements reserves the right to reappportion the Works (by adjusting the quantities) so that the final value of the reappportioned Works remains within 20% of the awarded value for the Contractor. Due to the integrated nature of the Project and the requirement for the completion of the bulk earthworks prior to implementation of the works described in this document, eThekwini Human Settlements will define the scope of works and the limit of construction for the Contractor prior to commencement of construction.

It is becoming increasingly important to consider procurement-related deliverables other than those relating to the primary purpose of the procurement itself, particularly those relating to poverty reduction, job creation, local economic development and local industry development. Key performance indicators relating to the engagement of enterprises, joint venture partners, local resources and local labour in contracts are needed to set targets in contracts.

eThekwini Human Settlement is therefore desirous of obtaining the following contract-specific goals relating to business and employment opportunities to be linked to the undertakings made to achieve nominated contract-participation goals relating to:

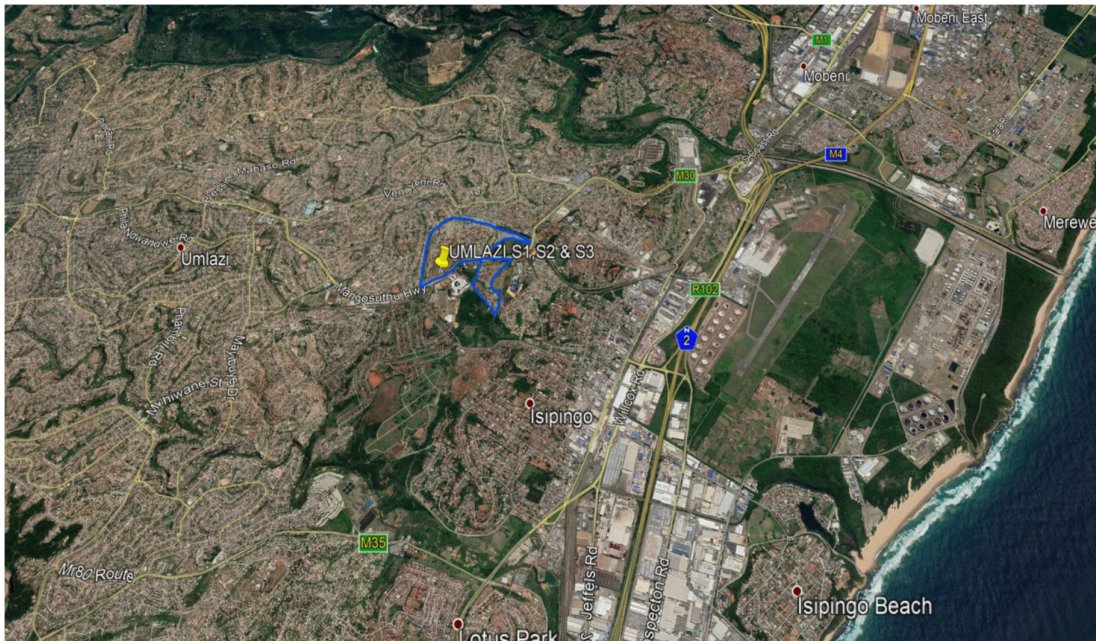
- a. local resources (targeted enterprises and targeted labour) (see ISO 10845-7 and C1.2.3.3). CPG component of tender document.

C3.1.2 Description of Works

Umlazi S1, S2 and S3 Housing project is a Human Settlement Development that is to be developed by eThekwini Municipality, Provincial and KZN Departments of Human Settlements. The project is planned to deliver low cost, housing units, roads and services to the standards of eThekwini Municipality. In total Umlazi S1, S2 and S3 project will provide low income housing and services to approximately 1139 Residents/Units, which will accommodate Emhlabeni and Ezakheleni areas.

Currently the project area of Umlazi S1, S2 and S3 consist of informal houses only and has no bulk sanitation, roads and water services in the area. There is the water in the area which is being supplied from the Umlazi reservoir in Umlazi.

The extent of the project area is demarcated in the boundary which is shown overleaf.



The extent of works for the project includes but is not limited to:

1. Clearing and grubbing of the site for all pipe services, roads and earthworks platforms.
2. The construction of earthworks for roads and platforms for a total of 1139 new residential units.
3. Construction of concrete dry stack retaining walls (where required).
4. Construction of the sewer reticulation system consisting of excavation of trenches, laying of sewer pipes and construction of manholes and erf connections.
5. Proving of existing bulk sewer main and connecting to it.
6. The construction of stormwater drainage consisting of stormwater lines, manholes, stormwater catchpits and outfalls.
7. Water reticulation, which includes the excavation of trenches, laying of water pipes, erf connections including the water meter, manifolds, installation of valves and fire hydrants and cutting into existing water pipes.
8. The construction of asphalt roads and sidewalks.
9. Construction of paved concrete pedestrian walkways.
10. Construction of earth stormwater attenuation facilities and earth channel.
11. The installation of cable ducts where required.
12. The installation of subsurface drains where required.
13. Road line marking and road signage.
14. Construction of traffic calming facilities in the form of asphalt "speed humps" where required.

Due to the integrated nature of the Project and the requirement for the completion of the bulk earthworks prior to implementation of the works described in this document, eThekweni Human Settlements will define the scope of works and the limit of construction for the Contractor prior to commencement of construction.

C3.1.3 Description of Site and Access

The site is located within rolling hill topography on an irregularly shaped plateau. The plateau sides are steep and covered with thick, dense bush and forest which is virtually impermeable

even to a Tractor Load Backhoe (TLB). There are also low lying valleys traversing the site. The steep sides of the plateau may be problematic due to some of the erven being planned on these steep sides.

The project is situated at the southern region of eThekweni Municipality jurisdiction, the area is located centrally in the Umlazi area and consists of two settlement areas S1; S2 (Emhlabeni) and S3 (Ezakheleni). S1 & S2 (Emhlabeni) area are located between the Zwelethu Station railway line in the north and the Griffiths Mxenge Highway in the south and S3 (Ezakheleni) between Mangosuthu University of Technology and Comtech High School, south of Griffiths Mxenge Highway. Formal access to the site is off Mangosuthu Highway exists. The extent of the site is shown in locality sketch below.

C3.1.4 Nature of Ground and Subsoil Conditions

The geology of uMlazi S1, 2 and 3 comprises mostly of Natal group sandstone. The sandstones generally consist of yellow/brown, maroon and grey mudstone, sometimes with a high silt component approaching siltstone classification. The mudstone alternate with sandstone units less than a metre to tens of meters thick consisting of grey, fine grained ultra-lithofeldspathic sandstone (approximately 20%) and mudstone (80%) as described. The sandstones commonly display flat-bedding, cross-bedding and micro-lamination while the mudstone is usually poorly stratified or massive.

Majority of the materials encountered on site can be classified as G7 – G10 materials in terms of the TRH 14, however with borderline high grading modulus. See attached Geotechnical Report.

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) Is work required out of normal hours? (eg. to accesses).
- (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. Although every effort has been made to depict these services accurately the positions shown must be regarded as approximate.

The designs proposes multiple connection points in order to promote and enable the phasing in of the project into multiple functional sections independent of each other.

- a) Bulk and internal sewer for the project will be connected as per the table below to which connection will be made.

DESCRIPTION	X- COORDINATE	Y- COORDINATE	PIPE SIZE
Connection Point 1	7941.6986	3316 117.8487	160 mm dia.
Connection Point 2	7991.7098	3316 383.0810	160 mm dia.
Connection Point 3	8039.0614	3316 262.8770	160 mm dia.
Connection Point 4	8239.4200	3316 007.4110	160 mm dia.
Connection Point 5	8230.1502	3316 028.9041	160 mm dia.
Connection Point 6	8618.2709	3316 383.4406	160 mm dia.
Connection Point 7	8643.0100	3316 727.0541	160 mm dia.
Connection Point 8	7903.3374	3316 643.8302	160 mm dia.
Connection Point 9	7961.6505	3316 768.8033	160 mm dia.
Connection Point 10	7876.8195	3316 934.8713	160 mm dia.
Connection Point 11	7873.6305	3316 109.6873	160 mm dia.

- b) Bulk and internal water for the project will be connected as per the table below to which connection will be made.

DESCRIPTION	X- COORDINATE	Y- COORDINATE	PIPE SIZE
Connection Point 1	8288.5426	3316 473.1189	200 mm dia.
Connection Point 2	8295.9173	3316 650.5252	200 mm dia.
Connection Point 3	8107.8761	3316 535.8141	160 mm dia.

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.8.3.8.1 c.**

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 eThekweni 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 eThekweni 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 eThekweni 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.5: Sewers;
- PS.6: Stormwater;
- PS.7: Electrical Cables / Lighting;

- PS.8: Telkom / Neotel;
- PS.9: 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.2.5 Power Supply, Water and other Services

The Contractor shall make his own arrangements concerning the supply of electrical power, water and all other services. No direct payment will be made for the provision of electricity, water and other services. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required, or in the Contractor's preliminary and general items as the case may be.

(a) Water for Works

The Contractor shall allow in his Establishment rates for the securing of a suitable water supply, the payment of any connection fee and for any water charges for the duration of the contract.

(b) Power Supply for Works

The power supply authority is eThekweni Electricity Service Unit. The Contractor will be responsible for arranging for whatever temporary supplies may be required and he will be required to bear all costs involved and to pay the ruling tariffs applicable to such supplies

PS.3 WATERMANS

PS.3.1 General

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

Note: It is important to briefly describe the work envisaged and the time required for this work where other organisations are involved. Particular attention should be paid to tie-ins to the existing live mains which normally have to be done by the Water Supply Branch even if the installation of the new main is included in the 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

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 replaced within the contract area (see drg xxxxxxxxA0). 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

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

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

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 OHS Act 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 OHSA Construction Regulations

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

Items that may qualify for remuneration will be specified in the 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 PERFORMANCE MONITORING OF SERVICE PROVIDERS

The performance of service providers that have been selected to provide assistance in the provision of a municipal service, otherwise than in circumstances where Chapter 8 of the

Municipal Systems Act applies, is required, by Section 116 of the Municipal Finance Management Act, to be monitored and reported on (see Cl.53 of the SCM 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.

Appropriate key performance indicators (KPIs) for the contract must be set by the Municipality as a yardstick for measuring performance.

PS.13 Employment of Local Labour

The Sub-contractors will be required to employ local labour as specified in the Relevant project Specifications - "The Use of CLOs and Local Labour" of this Contract document. For the purposes of this contract, "Local labour" will be deemed to be any persons who reside within the ward areas of the project. 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 main contractor and sub-contractor will remain responsible for providing proper supervision of all labour, and will be responsible for the quality of work produced.

PS.14 Geotechnical Professional Services

The geotechnical engineering services are to be provided by a registered Professional Geotechnical Engineer and is scheduled as Provisional Sums in the Bill of Quantities. The geotechnical engineering firm must have Professional Indemnity Insurance. The Employer reserves the right to approve the service provider prior to the relevant activity.

PS.14.1 Independent Materials Management

The proposed brief for the Independent Materials Management team will be to provide acceptance control testing for the bulk earthworks construction. The strict quality control and supervision will include but not be limited to the following:

1. Identify the suitability of materials for site specific purposes.
2. Advise the project team on materials usage for various applications.
3. Reduce the quantity of materials from commercial sources, hence reducing costs by identifying materials on site.
4. Assist in reducing the amount of material to be spoiled by carefully planning material usage.
5. Identify borrow areas within the site and surrounding areas (If required).
6. Assist with selection of materials for bulk earthworks (cut to fill), layerworks and site specific applications eg. backfill materials.
7. Sampling and classifying materials in terms of "G" Class via testing at a SANAS Accredited Laboratory.
8. Guide the contractor in the processing and management of materials so that the correct materials are selected for site.
9. Assess material brought onto site before processing.
10. Guide the contractor in terms of materials management and layer processing and advising on suitability of earthworks plant.
11. Oversee all laboratory test results as well as density results taken on site.
12. The team will report directly to the Employer's Agent.
13. Weekly reports will be provided to the Employer's Agent.

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.

SANS 1200 A -	GENERAL (1986)
SANS 1200 AB -	ENGINEER'S OFFICE (1986)
SANS 1200 C -	SITE CLEARANCE (1980, AMENDMENT 1, 1982)
SANS 1200 D -	EARTHWORKS (1988, AMENDMENT 1, 1990)
SANS 1200 DB -	EARTHWORKS (PIPE TRENCHES) (1989)
SANS 1200 DE -	SMALL EARTH DAMS (1984)
SANS 1200 DK -	GABIONS AND PITCHING (1996)
SANS 1200 DM -	EARTHWORKS (ROADS, SUBGRADE) (1981)
SANS 1200 GA -	CONCRETE (SMALL WORKS) (1982)
SANS 1200 L -	MEDIUM-PRESSURE PIPELINES (1983)
SANS 1200 LB -	BEDDING (PIPES) (1983)
SANS 1200 LC -	CABLE DUCTS (1981)
SANS 1200 LD -	SEWERS (1982)
SANS 1200 LE -	STORMWATER DRAINAGE (1982)
SANS 1200 LF -	ERF CONNECTIONS (WATER) (1983)
SANS 1200 M -	ROADS (GENERAL) (1996)
SANS 1200 ME -	SUBBASE (1981)
SANS 1200 MF -	BASE (1981)
SANS 1200 MG -	BITUMINOUS SURFACE TREATMENT (1996)
SANS 1200 MH -	ASPHALT BASE AND SURFACING (1996)
SANS 1200 MK -	KERBING AND CHANNELLING (1983)
SANS 1200 MM -	ANCILLARY ROADWORKS (1984)

Part	Description	Date of Issue	
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		
PG	Non Pressure Pipelines and Pc Culverts	July	1992
PH	Manholes and Appurtenant Drainage Works	July	1992
PJ	Pipe Jacking		
PG	Lateral Support Systems		
PS	Pump Stations: Sewage		
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

(Applicable to SANS 1200A-1986)

**PSA
PSA 1 GENERAL
Scope**

Replace the contents of Subclause 1.1, including the notes, with the following:

“1.1 This specification covers requirements, principles and responsibilities of a general nature which are generally applicable to civil Engineering construction and building works contracts, as well as the requirements for the Contractor’s establishment on the Site.”

PSA 2 INTERPRETATIONS**PSA2.3 Definitions**

In the opening phrase between the words “specification” and “the following”, insert the words “the definitions given in the General Conditions of Contract and.”

a) General

Add the following definitions:

“General Conditions and General Conditions of Contract: The General Conditions of Contract specified for use with this Contract, together with the Contract Data (GCC 2015) as applicable.

Specified: As specified in the Standardized Specifications, the Drawings or the Project Specifications. ‘Specifications’ shall have the corresponding meaning.”

c) Measurement and payment

Replace the definitions for “Fixed charge”, “Time-related charge” and “Value-related charge” with the following:

“Fixed charge: A charge that is not subject to adjustment on account of variations in the value of the Contract Price or the time allowed in the Contract for the completion of the work.

Time-related charge: A charge, the amount of which varies in accordance with the Time for Completion of the Works, adjusted in accordance with the provisions of the Contract.

Value-related charge: A charge, the amount of which varies pro rata with the final value of the measured work executed and valued in accordance with the provisions of the Contract.”

**PSA 3 MATERIALS
PSA 3.1 Quality**

Add the following at the end of Subclause 3.1:

“All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified to be in accordance with SANS Specifications shall bear the SANS mark, where such a mark is available for the type of product.”

**PSA 4 PLANT
PSA 4.1 Silencing of Plant**

Replace the contents of Subclause 4.1 with the following:

“The Contractor’s attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as

amended.

The Contractor shall at all times and at his own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations.”

PSA 4.2 Contractor's Offices, Stores and Services

Add the following paragraph before the existing first paragraph in Subclause 4.2:

“The Contractor's buildings, sheds and other facilities erected or utilised on the Site for the purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only night-watchmen may be on the Site after hours.”

Delete “and first-aid services” in the second paragraph of Subclause 4.2 and add the following:

“The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 10 workmen, which toilets shall be effectively screened from public view and their use enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

The Contractor shall, where applicable, make all necessary arrangements and pay for the removal of night soil.”

PSA 5 CONSTRUCTION

PSA 5.1 Survey

PSA 5.1.2 Preservation and replacement of survey beacons and pegs subject to the Land Survey Act.

Delete the words “in the vicinity of boundaries” in the second sentence of Subclause 5.1.2 and replace the words “under the direction of” in the same sentence with “in consultation and liaison with.”

Add the following after the second sentence of Subclause 5.1.2:

“The Contractor and the Employer's Agent shall record on the said list, their concurrence or disagreement (as the case may be) regarding the completeness and accuracy of the details recorded therein.”

Replace the third sentence of Subclause 5.1.2 with the following:

“At the completion of the Contract, the Contractor shall expose all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor for the checking of the positions of all such pegs and the replacement of those that the Land Surveyor's check reveals have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Employer's Agent, a certificate from the registered land surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions of this clause, have been

checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

The costs of all checking, replacement and certification as aforesaid shall be entirely for the Contractor's account. This, with the provision always that the Contractor shall not be held liable for the cost of replacement of pegs which:-

- a. cannot reasonably be re-established in their original positions by reason of the finished dimensions of the permanent works, and
- b. the Contractor can prove beyond reasonable doubt to the satisfaction of the Employer's Agent, were disturbed, damaged or destroyed by others beyond his control."

PSA 5.3 Protection of Existing Structures

Replace "Machinery and Occupational Safety Act, 1983 (Act No 6 of 1983)" *with* "Occupational Health and Safety Act, 1993 (Act No 85 of 1993), as amended," *and insert the following after* "(Act No. 27 of 1956)": "as amended".

PSA 5.4 Protection of Overhead and Underground Services

Replace the heading and the contents of Subclause 5.4 with the following:

"PSA 5.4 Location and Protection of Existing Services

PSA5.4.1 Location of existing services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by an experienced and competent contractor to be present on, under, over or within the Site.

Without in any way limiting his liability in terms of the General Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Employer's Agent, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where he intends to work.

Neither the Employer nor the Employer's Agent offers any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Employer's Agent, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the further requirements of Subclauses 4.4 and 5.1.2.2 of SANS 1200 D (as amended) shall apply.

The aforesaid procedure shall also be followed in respect of services not shown on the plans but which may reasonably be anticipated by an experienced Contractor to be present or potentially present on the site.

All services, the positions of which have been determined as aforesaid at the critical points, shall henceforth be designated as 'known services' and their positions shall be indicated by the Contractor on a separate set of drawings, a copy of which shall be furnished to the Employer's Agent without delay.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the site, it shall henceforth be deemed to be a known service

and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the site shall apply. The Contractor shall notify the Employer's Agent immediately when any such service is encountered or discovered on the Site.

Whilst he is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to

- a. known services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognizance being taken of such deviations in line and level which may reasonably be anticipated, and
- b. any other service which ought reasonably to have been a known service in accordance with the provisions of this clause,

The Contractor shall also be liable for consequential damage in regard to (a) and (b), whether caused directly by the Contractor's operations or by the lack of proper protection.

No separate payment will be made to the Contractor in respect of his costs of providing, holding available on the Site and utilising the said detecting and testing equipment, nor for any costs incurred in preparing and submitting to the Employer's Agent the Drawings as aforesaid. These costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

Payment to the Contractor in respect of exposing services at the positions agreed by the Employer's Agent and as described above will be made under the payment items (if any) as may be provided for in the respective sections of the specifications pertaining to the type of work involved."

PSA5.7 SAFETY

Replace the contents of Subclause 5.7 with the following:

"Pursuant to the provisions of the General Conditions of Contract, and without in any way limiting the Contractor's obligations thereunder, the Contractor shall at his own expense (except only where specific provision (if any) is made in the Contract for the reimbursement to the Contractor in respect of particular items), provide the following:

- a. Provide to its Employees on the site of the works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as amended (hereinafter referred to as the Act) at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times;
- b. Provide, install and maintain all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public;
- c. Implement on the site of the works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times;
- d. Implement all necessary measures so as to ensure compliance with the Act by all subcontractors engaged by the Contractor and their employees engaged on the works;
- e. Full compliance with all other requirements pertaining to safety as may be specified in the Contract.

The Employer and the Employer's Agent shall be entitled, although not obliged, to make such inspections on the site as they shall deem appropriate, for the purpose of verifying the

Contractor's compliance with the requirements of the Act. For this purpose, the Contractor shall grant full access to the site of all parts of the site and shall co-operate fully in such inspections and shall make available for inspection all such documents and records as the Employer's and/or Employer's Agent's representative may reasonably require.

Where any such investigations reveal, or where it comes to the Employer's Agent's attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this clause, the Employer's Agent shall, in accordance with the provisions of Clause 5.11, be entitled to suspend progress on the works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Employer's Agent, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the works or any part thereof is suspended by the Employer's Agent in terms of this clause, and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of Clause 5.13 should the Contractor fail to complete the Works on or before the specified due completion date in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute grounds for the Employer's Agent to act in terms of Clause 9.2.1 and for the Employer to cancel the Contract in accordance with the further provisions of the said Clause 9.2."

Add the following Subclauses to Clause 5:

“PSA 5.9 Site Meetings

The Contractor or his authorised agent will be required to attend regular site meetings, which shall normally be held once a month on dates and at times determined by the Employer's Agent, but in any case whenever reasonably required by the Employer's Agent. Unless otherwise indicated in the Contract or instructed by the Employer's Agent, such meetings shall be held at the Contractor's offices on the site. At such monthly meetings, matters such as general progress on the works, quality of work, problems, claims, payments, and safety shall be discussed, but not matters concerning the day-to-day running of the Contract.”

“PSA5.11 Security

PSA5.11.1 Security of Contractor's Plant and Personnel

The Tenderer shall note that, notwithstanding the insurances effected by the Employer, the Contractor shall be responsible for the effecting of safety and security of plant and personnel on and around the site of the works, and that no claims in this regard will be entertained by the Employer.

The Contractor's attention is drawn to the fact that the work is to be carried out in an area where there is a high incidence of criminal activity.

The sum entered by the Contractor in the Bill of Quantities for effecting of safety and security of plant and personnel on and around the site of the works shall be deemed to include full compensation for all the measures necessary to effect the safety and security including the provision of armed security guards for the duration of construction.”

PSA 6 TOLERANCES

Add the following Subclause to Clause 6:

“PSA 6.4 Use of Tolerances

No guarantee is given that the full specified tolerances will be available independently of each other, and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Employer's Agent, without any allowance for the specified tolerances. Except if otherwise specified, all measurements for determining quantities for payment will be based on the 'authorised' dimensions.

If the work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the calculation of quantities will be based on the 'authorised' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Employer's Agent may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed.”

PSA 7 TESTING

PSA 7.1 Principles

PSA 7.2 Approved Laboratories

Replace the contents of Subclause 7.2 with the following:

“Unless otherwise specified in the relevant specification or elsewhere in the Project Specification, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Employer's Agent of the quality of materials used and/or workmanship achieved, may be carried out:

- a. Any testing laboratory certified by the South African National Accreditation Systems (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;
- b. Any testing laboratory owned, managed or operated by the Employer or the Employer's Agent;
- c. Any testing laboratory established and operated on the Site by or on behalf of the Employer or the Employer's Agent.
- d. d) Any other laboratory that the Employer's Agent approves in his absolute discretion.”

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 Measurement

PSA 8.1.1 Method of measurement, all sections of the Schedule

Delete the words “and South West Africa”.

In the second line of Subclause 8.1.1, after the words 'standardised specification or in' add: 'the measurement and payment clause of the particular specification or'.

PSA 8.2.2 Time-related items

Notwithstanding the stipulation of Subclause 8.2.2, an approved extension of time will only entitle the Contractor to payment in terms of Subclause 5.12.3 of the General Conditions of Contract.

PSA 8.3 Scheduled Fixed-charge and Value-related Items**PSA 8.3.2.1 Facilities for Employer's Agent**

Delete sub-items (a), (b) and (c) and substitute:

a) Office buildings (refer to PSAB 3.2.1)	Unit: Sum
b) Car ports (refer to PSAB 3.2.2)	Unit: Sum
c) Broadband USB Modem (4G) (refer to PSAB 4.1 and 5.4)	Unit: Sum
d) Nameboards (2 no.)	Unit: Sum
e) Survey assistant and survey materials	Unit: Sum
f) Printer, scanner and copier	Unit: Sum

PSA 8.3.2.2 Facilities for Contactor

Delete sub-items (a)-(j) and substitute:

a) Offices and storage sheds	Unit: Sum
b) Workshops	Unit: Sum
c) Ablution and latrine facilities	Unit: Sum
d) Tools and equipment	Unit: Sum
e) Water supplies, electric power and communications	Unit: Sum
f) Dealing with water	Unit: Sum
g) Access and traffic	Unit: Sum
h) Plant	Unit: Sum

Add the following new Subclause:

“PSA8.3.5 Security of Contractor's Plant & Personnel Unit: Sum

The tendered sum shall include full compensation for all costs incurred in establishing the service to provide for the safety and security of plant and personnel on site as described in Clause PSA5.11.1.”

PSA8.4 Scheduled Time-Related Items**PSA8.4.2.1 Facilities for Employer's Agent**

Delete sub-items (a), (b), (c) and (d) and substitute:

a) Office buildings (refer to PSAB 3.2.1)	Unit: Sum
b) Car ports (refer to PSAB 3.2.2)	Unit: Sum
c) Cellular airtime and data (R 2 000/month) (refer to PSAB 4.1 and 5.4)	Unit: Sum
d) Nameboards (Number stated)	Unit: Sum
e) Survey assistant and survey materials	Unit: Sum
f) Printer, scanner and copier	Unit: Sum

PSA8.4.2.2 Facilities for Contactor

Delete sub-items (a)-(j) and substitute:

a) Offices and storage sheds	Unit: Sum
------------------------------	-----------

b) Workshops	Unit: Sum
c) Ablution and latrine facilities	Unit: Sum
d) Tools and equipment	Unit: Sum
e) Water supplies, electric power and communications	Unit: Sum
f) Dealing with water	Unit: Sum
g) Access and traffic	Unit: Sum
h) Plant	Unit: Sum

Add the following new Subclause:

“PSA 8.4.3 Supervision for duration of Construction Unit: Sum

Add the following to this Subclause:

“The Tenderer will include the costs associated with the employment of local community labour as described in Clause C1.2.3.2.”

Add the following new Subclause:

“PSA 8.4.5 Security of Contractor’s Plant and Personnel Unit: Sum

“The tendered sum shall include full compensation for the ongoing costs incurred in maintaining the safety and security of plant and personnel on site for the duration of Construction as described in Clause PSA5.11.1.”

PSA8.5 Sums Stated Provisionally by the Employer’s Agent

Replace the contents of Subclause 8.5 with the following:

“PSA8.5.1 Works executed by the Contractor Unit: Prov Sum

PSA8.5.1.1 The Contractor shall be reimbursed in substitution of the Provisional Sums (if any) allowed in the Bill of Quantities for work to be executed by the Contractor, in the amounts determined in accordance with the provisions of Clause 6.6.

PSA 8.5.1.2 The Contractor shall be reimbursed for the training of Local Labourers at the rate for various training courses as per the training proposal by the Contractor. Costs for training shall include everything necessary for the delivery of the skills training programme as described in the particular Specification C 3.4. 3 SCD Small Contractor Development, including the following:

- a. Sufficient skilled, competent and accredited trainers to deliver the training programmes in accordance with the training courses;
- b. A suitably furnished venue;
- c. Transport of the trainees;
- d. Tools, equipment and teaching aids;
- e. Stationery and all other necessary materials;
- f. Trainees time (for workers employed by the Contractor).
- g. Overheads and profit for costs tendered

The Contractor shall be reimbursed for the employment of a Community Liaison Officer (CLO), if required.

PSA 8.5.1.3 Special water control: The contractor shall design temporary water control by the construction of a coffer dam or other method of protecting the works or relevant portion thereof from damage or disruptions resulting from water within the dam. The Contractor shall then submit a method statement with associated costs as to how he proposes to protect the works/control the water for approval by the Employer's Agent. The PSum is for the provision of the structures/backfill required as well as the consequent removal of the structure/backfill and the reinstating of the dam to its original condition.

PSA 8.5.2 Works executed by Subcontractors

- | | |
|--|----------------|
| a) Work to be executed by a Subcontractor | Unit: Prov Sum |
| b) Overheads, charges and profit on item (a) above | Unit: % or sum |

Sub-items (a) and (b) will be provided in the Bill of Quantities for each different Nominated Subcontract included in the Contract.

The Contractor shall be reimbursed under sub-item (a), in substitution of the respective Provisional Sums (if any) allowed in the Bill of Quantities, the amounts actually paid or payable by the Contractor to the respective Nominated Subcontractors, in accordance with the provisions of Clause 6.6.

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

- a. where the unit of measurement for sub-item (b) was specified as being a percentage, the respective percentage, as stated by the Contractor in its tender, of the amount certified by the Employer's Agent for payment under the related sub-item (a), all in accordance with the provisions of Clause 6.6.1.2.1, or
- b. where the unit of measurement for sub-item (b) was specified as being a lump sum, an amount which is in the same proportion to the amount certified for payment under subitem (a) and the tendered lump sum is to the amount of the Provisional Sum stated under sub-item (a) in accordance with the provisions of Clause 6.6.1.2.2,
- c. provided always that where the Contractor has failed for any reason to insert a percentage or sum (as applicable) for sub-item (b) in its tender, or where no provision was made in the tender documents for Tenderers to make any such entry, the Contractor will be paid an amount equal to SEVEN AND ONE HALF PER CENT (7.5%) of the amount actually certified by the Employer's Agent for payment under sub-item (a).

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

PSA 8.6 Prime Cost Items

Replace the content of Subclause 8.6 with the following:

- | | |
|---|--------------|
| i. Description of item to which Prime Cost Sum applies | Unit: PC Sum |
| ii. Charge required by Contractor on sub-item (a) above | Unit: % |

Subitems (a) and (b) will be provided in the Bill of Quantities for each different item to which a Prime Cost Sum applies.

The Contractor shall be reimbursed under sub-item(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services supplied, but excluding any charges for the Contractor's labour, profit, carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under sub-item (b), the respective percentage, as stated by the Contractor in his tender, of the amount certified by the Employer's Agent for payment under the related sub-item (a). The percentages tendered by the Contractor for each respective subitem (b) included in the Bill of Quantities shall be deemed to be in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related sub-item (a).

If the Contractor shall have omitted within his tender to insert a tendered percentage under sub-item (b), or tendered a zero percentage, the Contractor's tendered rate for sub-item (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under subitem (b).

Note in connection with additional tests required by the Employer's Agent:

When a PC sum is included in the Bill of Quantities for additional tests required by the Employer's Agent, the Contractor shall be responsible for both the cost of normal testing as described in Subclause PS7.2 in Portion 1 of the Project Specifications and for the cost of any additional test that indicates that the specifications have not been complied with.

PSA 8.7 Daywork

Replace the contents of Subclause 8.7 with the following:

"Measurement and payment shall be in accordance with the provisions of Clause 6.5 of the General Conditions of Contract for the Contractor's own plant used Daywork shall cover the full cost of the use of such plant and shall therefore cover the cost of plant operators, consumable stores, fuel and maintenance."

PSA 8.8.4 Existing Services

Add the following new item:

"PSA 8.8.4(e) Reporting on all existing underground services regarding location, size and material type, including preparation of detail drawings Unit: Sum

Measurement and payment shall include surveying of the services, preparation of detail drawings and report writing on the known services. The complete report will be made available to the Employer's Agent not later than 2 weeks after the written instruction to proceed is given by the Employer's Agent."

Add the following to Subclause A8.8.5

“PSA 8.8.5 Cost of survey in terms of the Land Survey Act Unit: Sum

The Contractor will be responsible to locate and protect the existing boundary pegs. A registered Land Surveyor must to be appointed by the Contractor and the boundary pegs needs to be recorded.

All boundary peg information needs to be supplied to the Employer’s Agent in order to confirm the position of the proposed pipeline and structures. The sum shall include for all costs incurred by the Contractor to locate the boundary pegs, record (survey) the boundary pegs, report on the boundary pegs, including all labour, surveying, disbursements, etc.”

Add the following new Subclauses:

“PSA 8.9 Wayleave Unit: Sum

The tendered sum shall include full compensation to the Contractor for all the costs involved in obtaining the wayleave as specified in C3.4.7.

PSA 8.10 Compliance with OHS Act and Regulations Unit: Sum
(including the Construction Regulations 2014)

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the OHS Act and Regulations (including the Construction Regulations 2014) at all times for the full duration of the Contract, as described in C3.3.2. The successful Tenderer shall provide the Employer’s Agent with a complete breakdown of this tendered sum. This sum will be paid to the Contractor in equal monthly amounts subject to proper/ substantial compliance.

PSA 8.11 Compliance with the Environmental Specification Unit: Sum
(including the NEMA Act and Environmental Regulations)

The tendered sum shall include full compensation to the Contractor for compliance with all the requirements of the Environmental Specifications, NEMA Act and latest Environmental Regulations at all times for the full duration of the Contract as described in C3.3.3

The successful Tenderer shall provide the Employer’s Agent with a complete breakdown of this tendered sum. This sum will be paid to the Contractor in equal monthly amounts subject to proper/substantial compliance.”

PSAB: ENGINEER'S OFFICE
(Applicable to SANS 1200AB-1986)

PSAB1 SCOPE**PSAB 1.1** *Delete this Subclause and substitute:*

"This Specification covers the requirements for office, laboratory, store room, locker room, car ports, laboratory equipment and the minimum associated facilities for the use of the Employer's Agent on the site.

THE CONTRACTOR SHALL NOTE THAT THESE ARE GENERAL REQUIREMENTS AND THAT ONLY THOSE ITEMS THAT ARE SPECIFICALLY ITEMISED IN THE BILL OF QUANTITIES ARE REQUIRED ON THIS CONTRACT.

When the Contract is awarded, the Employer's Agent shall give the Contractor full details in writing regarding the number, type and layout of all the units required, as well as details of fittings and equipment required. The Contractor shall not order any buildings, material, equipment or fittings on the basis of what is specified or scheduled without written confirmation from the Employer's Agent.

The offices, laboratory, store room, locker room and car ports shall, unless otherwise agreed or instructed, be erected in close proximity to the Contractor's offices and laboratory and the entire area shall be fenced with security fencing and provided with a gate. The Contractor shall take all reasonable precautions to prevent unauthorised entry to the offices and laboratories and to ensure the general security of the offices."

PSAB2 INTERPRETATIONS**PSAB 2.3 Definitions**

Add the following definition:

"Car Port: A roofed shelter constructed on site for one or more cars as specified or scheduled."

PSAB3 MATERIALS**PSAB 3.2 Office Building(s)**

Delete this Subclause entirely and re-title the Subclause 'FACILITIES FOR EMPLOYER'S AGENT'.

Add the following Subclauses:

"PSAB 3.2.1 Office Buildings

The Contractor shall provide, furnish and equip one Type 1 office and one Type 2 office for the use of the Employer's Agent.

Buildings for offices shall be constructed of timber, asbestos or other approved materials. The buildings shall have double walls filled with insulating material and lined on the inside with timber

or other approved material. Ceilings shall be provided and offices shall have timber or concrete floors with edge to edge foam-backed needle punch carpeting in either case.

Office buildings shall be painted with an approved paint after erection and the paintwork shall be maintained in good repair throughout the contract period.

Each door shall be provided with a lock (external doors having at least three levers mechanisms) and two keys.

The siting of all offices shall be to the Employer's Agent's satisfaction and shall be decided upon in consultation with him and confirmed in writing before erection. All accommodation shall include the provision of a 220/250 volt AC electrical supply, access roads where required and toilet facilities. The latter shall include a fresh clean potable water supply and sewerage, including septic tanks, or main drainage connections. All the foregoing will be considered as part and parcel of the accommodation provided and will not be paid for separately.

All accommodation shall meet with the approval of the Employer's Agent.

The offices shall comply with the following requirements:

Dimensions	Type 1 Office	Type 2 Office
Minimum floor area	36,0 m2	16,0 m2
Minimum window area	6,0 m2	2,4 m
Minimum window area opening	3,6 m2	1,5 m2
Minimum clear height	2,4 m	2,4 m

Furniture and equipment:

Each office shall be equipped with the following:

- Office desk with a surface area of at least 1,5 m2 and having at least 3 drawers, one of which can be locked.
- General purpose steel cabinet with doors, lock and two keys with at least 1,5 m2 shelf area and a volume of 0,7 m3.
- Two office chairs.
- Sufficient racks and hangers for hanging contract drawings. The hangers shall be of the 'Barhold' type, with one hanger to five drawings.
- Double 80 watt fluorescent light fittings complete with ballast and tubes (three per Type 1 office, and one per Type 2 office).
- Drawing table with a smooth flat top having an area of at least 3 m2 (Type 2 office only).
- One draughtsman's stool fitted with a padded seat with adjustable seat height.
- 220/250 volt 15 amp power points (four per Type 1 office, two per Type 2 office).
- Windows shall be fitted with Venetian or Opaque roller blinds.
- Electric space heater with enclosed elements of not less than 1.5 kW. (Two per Type 1 office, one per Type 2 office.)

In addition to the above the Type 1 office shall be equipped with the following:

- Conference table large enough to accommodate twelve people and have a surface area of at least 4 m2.

- Ten office chairs.
- Steel filing cabinet fitted with four drawers on runners. Cabinet shall be fitted with locks and shall be 1 300 mm high, 460 mm wide and 600 mm from front to back.
- One 150 l refrigerator
- Survey equipment as listed below:
 - One theodolite capable of reading to twenty seconds of arc plus tripod
 - One automatic level and tripod
 - One levelling staff (4 m long, 1 cm gradations)
 - Two tachometric staves; (5 m long, 1 cm chess board pattern)
 - Two staff angle bubbles
 - One metal change-point for levelling
 - One separate plumb-bob
 - One spirit level (one metre long)
 - Six steel-tipped ranging rods each 2,5 m long
 - Two canvas carry-bags
 - One 100 m stilon tape
 - One 25 m stilon tape
 - One 5 m steel tape
 - One hammer (2 kg)
 - One electronic detector for locating underground services
 - Steel pegs in sufficient quantities as required

The tachometer may be shared by arrangement between the Contractor and the Employer's Agent, but the remaining instruments shall be provided for the exclusive use of the Employer's Agent. The Contractor shall keep the equipment continuously insured against any loss, damage, or breakage and he shall indemnify the Employer's Agent and Employer against any claims in this regard.

The Contractor shall also provide a toilet for the exclusive use of the Employer's Agent. The toilet shall be of the flush type, complete with sewer reticulation or septic/conservancy tanks. The room shall be equipped with hand wash basin complete with taps and drain and towel rail.

On completion of the Works, ownership of the buildings, furnishings and equipment shall revert to the Contractor who shall remove them from the Site.

PSAB 3.2.2 Car Ports

The Contractor shall provide car ports adjacent to the offices as directed by the Employer's Agent.

Three (3 no.) car ports shall be so constructed and positioned that the vehicles parked under them will at all times be protected against the direct rays of the sun. Each car port shall be at least 20 m² in area and the floors shall consist of a layer of broken stone to alleviate dusty and muddy conditions.

The Contractor shall maintain the car ports in good condition throughout the contract period.

Upon completion of the whole of the Works, the ownership of the car ports shall revert to the Contractor who shall remove them from the site.

PSAB 3.2.3 Air-Conditioning Units

Where required by the Employer's Agent, the Contractor shall provide, install and maintain air-conditioning units.

The air-conditioning unit shall be an electricity operated compressor type with closed circuit, and not an evaporation type. The capacity of the air-conditioning units shall be at least 2.2 kW each.

On completion of the Works, ownership of the air-conditioning units shall revert to the Contractor who shall remove them from the Site.

PSAB 3.2.4 Computer Equipment

The Contractor shall provide an A3 printer/scanner/copier, of approved manufacture and of standard acceptable to the Employer's Agent, and for the sole use of the Employer's Agent's Representative and his/her assistants for the duration of the Contract. The Contractor shall keep this equipment continuously and comprehensively insured and shall indemnify the Employer and the Employer's Agent against any claims in this regard. The Contractor shall maintain this equipment in good working order until the completion of the Works, whereupon ownership of said hardware and software shall revert to the Contractor."

PSAB4 PLANT

PSAB4.1 Telephone / Cellphone

Delete the Subclause and replace with the following:

"The Contractor will provide a broadband USB Modem (4G) for which an item is included in the Bill of Quantities. The Employer's Agent's Representative and his/her staff will provide their own mobile phones."

PSAB5 CONSTRUCTION

PSAB 5.4 Telephone

Add to the Subclause:

"The Employer's Agent's Representative and his staff will be provided with R1 000 airtime and R1 000 data per month for which an item is included in the Bill of Quantities."

PSAB 5.5 Survey Assistants

Delete this Subclause and substitute:

"The Contractor shall make available to the Employer's Agent on a full-time basis a cleaner/office assistant and in addition, when required, a suitably trained and approved survey assistant and labourers necessary to assist the Employer's Agent in carrying out survey work, setting out and measurement of the works. The Contractor shall supply all pegs and concrete necessary for the setting out of the work. The wages of the cleaner/office assistant, survey assistant and labourers shall be paid by the Contractor."

PSAB8 MEASUREMENT AND PAYMENT

PSAB 8.1 Scheduled Items

Add to the Subclause:

“The Tenderer is to include, under the Fixed Charge and Value Related Items, a Sum to provide a broadband USB Modem (4G)

.
Under the Time Related Items, a Sum calculated at a rate of R2 000.00 per month for a period of time equal to the tendered Time for Completion of the Contract (see Contract Data) , is provided to cover the cost of the Employer’s Agent’s cellphone calls and data.

The Contractor’s overhead costs, charges and profit related to providing this Sum are to be recovered through the Fixed Charge Sum for the broadband USB Modem (4G).”

PSAB 8.3 Submission of As-Built Data

The Tenderer shall note lump sum Item – Part AB covering the submission of as-built data.

The Contractor shall supply the Employer’s Agent with:-

- a) a list of surveyed co-ordinates of cable duct markers and watermain valve covers constructed or modified during the course of the contract.
- b) a list of surveyed invert and cover levels, and co-ordinates of all catchpits and manholes constructed or modified during the course of the contract.
- c) As-built records of Materials Testing results.

The completion certificate shall not be issued unless the above information has been forwarded to the Employer’s Agent.

PSC: SITE CLEARANCE

(Applicable SANS 1200 C - 1980 As Amended 1982)

PSC 3 MATERIALS**PSC 3.1 Disposal of material***Add the following:*

“The Contractor shall obtain his own dumping sites for the disposal of material and all transport costs shall be included in the rates tendered for site clearance.”

PSC 5 CONSTRUCTION**PSC 5.1 Areas to be cleared and grubbed***Add the following:*

“Unless otherwise indicated by the Employer’s Agent, clearing and grubbing are limited to the entire site and if requested by the Employer’s Agent the spoil areas. The Contractor may proceed with clearing and grubbing after the handing over of the site. Measurement and payment for clearing and grubbing shall only occur for areas as required in writing by the Employer’s Agent.”

Substitute the last paragraph with the following:

“The Contractor shall program his work in such a manner that reclearing will not be necessary. The cost of reclearing shall be borne by the Contractor.”

PSC 5.2 Cutting of trees**PSC 5.2.3 Preservation of trees****PSC 5.2.3.2 Individual trees***Replace the last sentence with the following:*

“An amount of R2 500.00 will be deducted from moneys due to the Contractor as a penalty for every tree that is damaged or removed unnecessarily.”

PSC 5.5 Reclearing of vegetation*Add the following:*

“When areas have to be recleared on the written instructions of the Employer’s Agent, such reclearing shall be carried out at the Contractor’s own cost and the Contractor is therefore advised not to clear the areas too soon.”

PSC 5.9 Temporary Fencing

The Contractor shall supply, install and maintain temporary wire mesh fencing on all sides of the working area and around the perimeter of all agreed additional working areas during construction for prevention of access by the general public. The fence shall be relocated on a daily basis with open excavations.

The Contractor shall be held responsible for the control of access, as well as to the worksite during removal and re-erection of fencing. The Contractor shall be responsible for monitoring the fencing on a daily basis and repairing any such opening within the same day that it is detected.”

PSC 8 MEASUREMENT AND PAYMENT

PSC 8.2 Scheduled Items

PSC 8.2.1 Clear and grub

Replace the first line with the following:

“The area designated by the Employer’s Agent to be cleared and grubbed will be measured in square metres to the nearest square metre.”

PSC 8.2.10 Amend the description of 8.2.10 to read:

Remove topsoil to depth ordered by the Employer’s Agent and stockpile and maintain.

Add the following items in Subclause 8.2:

PSD: EARTHWORKS
(Applicable to SANS 1200 D - 1982)

PS D EARTHWORKS
PSD 2 INTERPRETATIONS
PSD 2.1 SUPPORTING SPECIFICATIONS

Replace Subclause 2.1.2 with the following:

PSD 2.1.2 Any of the other SANS 1200 specifications may form part of the Contract documents.”

PSD 2.3 Definitions

Replace the definition for “Specified density” with the following:

“Specified density: The specified dry density expressed as a percentage of modified AASHTO dry density.”

Replace the definition for “Stockpile” with the following:

“Stockpile (verb): The process of selecting and, when necessary, loading, transporting and off-loading material in a designated area for later use for a specific purpose”

Add the following definitions:

Fill: An embankment or terrace constructed of material obtained from excavations or borrow pits. In roads it includes the earthworks up to the underside of the selected subgrade level.

Fill (material): Material used for the construction of an embankment or terrace.

PSD 3 MATERIALS
PSD 3.1 Classification for Excavation Purposes

PSD 3.1.1 Method of classifying

Add the following:

“The class in which any material to be excavated falls, other than 'soft or intermediate excavation', shall be agreed upon between the Employer’s Agent and the Contractor prior to excavation commencing.

The Contractor shall immediately inform the Employer’s Agent if and when the class of the material being excavated changes to such an extent that it falls into a different class for further excavation. Failure on the part of the Contractor to advise the Employer’s Agent in good time shall entitle the Employer’s Agent, at his discretion, to reclassify such excavated material.”

PSD 3.2.3 Material suitable for backfill or fill against structures

Replace the contents of this subclause with the following:

“Material used for backfill behind structures shall generally be the material excavated, subject to the following conditions:

- a. The material shall not contain an excessive number of stones retained on a 50 mm sieve;
- b. The material shall not contain large clay lumps that do not break up under the action of the compaction equipment; and
- c. The liquid limit of the material shall not exceed 40, neither shall the PI exceed 18.”

PSD 3.3 Selection

Add the following subclause:

PSD 3.3.3 Selection from borrow pits and excavations

Approval of a borrow area for a specified purpose does not necessarily mean that all the material in that area is suitable for that purpose but merely that the borrow area contains some suitable material. The onus shall rest on the Contractor to ensure that only material that is indeed suitable is removed and used for the specified purpose.

When the Contractor has to select excavated material for a specific purpose, the above provisions relating to borrow areas shall apply mutatis mutandis to excavations.

The Contractor shall not waste or contaminate material that has been selected for a specific purpose.

PSD 4 PLANT

PSD 4.4 Detectors

Replace the contents of Subclause 4.4 with the following:

“The Contractor shall, for the purposes of detecting and locating underground services in accordance with the provisions of Subclause 5.4 of SANS 1200 A and Subclause 5.1.2 of SANS 1200 D, at his own cost, provide and use detecting equipment which is suitable for the detection of underground cables and pipes.”

PSD 5 CONSTRUCTION

PSD 5.1 Precautions

PSD 5.1.1 Safety

PSD 5.1.1.1 Barricading and lighting

Replace “Machinery and Occupational Safety Act, 1983 (Act 6 of 1983) PSD” with “Occupational Health and Safety Act, 1993 (Act 85 of 1993, as amended in 2014)”.

PSD 5.1.1.2 Safeguarding of excavations

Replace “Machinery and Occupational Safety Act PSD” with “Occupational Health and Safety Act, 1993 (Act 85 of 1993, as amended in 2014)”.

PSD 5.1.1.3 Explosives

Replace the contents of this subclause with the following:

“The Contractor will generally be permitted to use explosives for breaking up hard material during excavations, for demolishing existing structures, and for other purposes where explosives are normally required, subject to the following conditions:

- a) The Employer’s Agent may prohibit the use of explosives in cases where, in his opinion, the risk of injury to persons or damage to property or to adjoining structures is too high. Such action by the Employer’s Agent does not entitle the Contractor to additional payment for having to resort to less economical methods of construction.
- b) The Employer’s Agent’s prior written approval shall be obtained for each and every blasting operation. This approval may be withheld if the Contractor does not use explosives responsibly and carefully.
- c) The Contractor shall comply fully with the requirements of the Explosives Act, 1997 (Act No 83 of 1997) and all other legislation and regulations as may be applicable to blasting and the use of explosives.
- d) Before blasting is undertaken, the Contractor shall satisfy the Employer’s Agent that he has established whether or not the insurers concerned require pre- and post-blasting inspections of buildings and structures within a certain radius of the proposed blasting.

Should such inspections be required, the Contractor shall, together with the Employer’s Agent and the insurer, examine and measure the buildings, houses or structures in the vicinity of the proposed blasting site and establish and record, together with the owner, lessee or occupier, the extent of any existing cracking or damage before blasting operations commence.

- a) When there is a possibility of damage to power and telephone lines or any other services or property, the Contractor shall adapt his method of blasting and the size of the charges and shall use adequate protective measures (e.g. cover-blasting) to reduce the risk of damage.
- b) All accidents, injury to persons and animals and damage to property shall be reported to the Employer’s Agent in detail and in writing as soon as is practicable.
- c) The Employer’s Agent shall be given 24 hours’ notice by the Contractor before each blasting operation is carried out.
- d) When blasting to specified profiles, the Contractor shall so arrange the holes and charges that the resulting exposed surfaces are as sound as the nature of the material permits. The Contractor shall make good, at his own expense, any additional excavation necessitated by the shattering of rock in excess of any overbreak allowances specified in the Project Specifications or given on any Drawing.

Notwithstanding the Contractor’s compliance with the above provisions, the Contractor shall remain liable for any injury to persons and animals and loss of or damage to property occurring as a result of blasting operations.”

PSD 5.1.2.3 Protection of cables

Replace Subclause 5.1.2.3 with the following:

“PSD 5.1.2.3 Protection during construction

Further to the requirements of Subclause 5.4.2 of SANS 1200 A (as amended), major excavating equipment and other plant shall not be operated dangerously close to known services. Where necessary, excavation in close proximity to known services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work.

Should any service not being a known service be discovered or encountered during the course of the Contract, the Contractor shall, in addition to complying with the requirements of Subclause 5.4.2 of SANS 1200 A (as amended), immediately notify the Employer’s Agent thereof and implement such measures as will prevent damage of such service or, if it was damaged in the course of discovery, will prevent and minimise the occurrence of any further damage occurring.”

PSD 5.1.2.4 Negligence

Delete Subclause 5.1.2.4.

PSD 5.1.3 Stormwater and Groundwater

Add the following:

“The Contractor shall, where applicable and at the earliest practicable opportunity, install the permanent drainage specified or shown on the Drawings and shall at his own cost provide the temporary drainage required to protect the works.”

PSD 5.1.6 Road traffic control

Delete the second sentence of Subclause 5.1.6.

PSD 5.2 Methods and Procedures**PSD 5.2.2 Excavation****PSD 5.2.2.1 Excavation for General Earthworks and for Structures**

Add the following to paragraph (b):

“When the nature of the material precludes the above procedure, additional excavations shall be carried out to provide working space for the erection of formwork. In general, payment will be made for excavating a working width of 600 mm, but the Contractor may excavate a greater working width at no additional cost to the Employer.”

Replace the first sentence of paragraph (e) with the following:

“Where excavations have been carried below the authorised levels, the Contractor shall backfill such excavations to the correct level with approved gravel compacted to 90% of modified AASHTO density or to the density of the surrounding material, whichever is the higher density. Where excavations for structures have been carried out in hard material, the Employer’s Agent may direct that over-excavation be backfilled with weak concrete if there is a danger of settlement

or differential settlement of the foundations.

Where the sides of excavations against which concrete is to be cast have been overexcavated or have collapsed partially, the Contractor shall retrim the excavations if necessary and, unless other remedial measures are agreed to by the Employer's Agent, shall cast the concrete for the structure, including the additional concrete that may be required as a result of the over-excavation or partial collapse. The cost of the additional concrete or remedial measures shall be for the Contractor's account."

PSD 5.2.2.3 Disposal

Replace the second sentence with the following:

"The Contractor shall provide all necessary spoil sites for the spoiling of all surplus and unsuitable materials and shall make the necessary arrangements with the owner of the site where the material is disposed of, and pay all charges and levies as may be applicable for the use of such spoil sites.

Every spoil site provided by the Contractor shall be approved by the local authority in whose area it is located, and the spoiling shall comply with the applicable statutory and municipal regulations as well as the requirements of the owner of the spoil site.

Payment to the Contractor in respect of locating and making arrangements for suitable spoil sites and spoiling material at such sites will be made in accordance with the provisions of Subclause PSD8.3.6."

PSD 5.2.2.4 Selection and stockpiling

Add the following subclause in subclause 5.2.2:

"Approval or designation of the material in a particular borrow pit or excavation for a particular purpose does not imply that all the material in the borrow pit or excavation is suitable for the particular purpose to which the said approval or designation relates, nor that all material in the borrow pit or source should be used for the particular purpose. The Contractor shall select suitable material from that borrow pit or source, discard unsuitable material and reserve material for other purposes as necessary.

The Contractor shall organise and carry out his operations in such a manner as will prevent the contamination of suitable embankment and backfill material with unsuitable materials. Any excavated material which becomes, in the Employer's Agent's opinion, unsuitable for use in embankments or backfill as a result of contamination, shall be disposed of in a manner acceptable to the Employer's Agent and shall be replaced by the Contractor with materials acceptable to the Employer's Agent, all at the Contractor's cost.

When required, or when ordered by the Employer's Agent, material shall be stockpiled for later use. The additional costs for stockpiling material shall be paid to the Contractor in accordance with the provisions of Subclause PSD8.3.14."

PSD 5.2.5 Transport for Earthworks

Replace the contents of subclause 5.2.5 with the following:

“The transport of all excavated materials, irrespective of the distance and source, within Zone 1 and 2 (as described in Clause CC3.1 Project Description and Scope of Contract) shall be deemed to be free-haul, the cost of which is included in the Contractor’s tendered rates and prices for the excavation of the materials. No separate compensation shall apply for the transportation of excavated materials.”

PSD 7 TESTING

PSD 7.2 Taking and Testing of Samples

Replace the contents of this subclause with the following:

“The Contractor shall arrange with the approved independent laboratory engaged by the Contractor in terms of the Project Specifications to carry out sufficient tests on a regular basis as agreed between him and the Employer’s Agent to determine whether the degree of compaction, and, where applicable, the quality of materials used, comply with the Specifications and shall submit the results of these tests to the Employer’s Agent in a form approved by him.

The compaction requirements for fills shall be deemed complied with when at least 75% of the dry-density tests on any lot show values equal to or above the specified density and when no single value is more than five percentage points below the specified value.”

PSD 8 MEASUREMENT AND PAYMENT

PSD 8.3 Scheduled Items

PSD 8.3.1 Site preparation

Replace Subclauses 8.3.1.1 and 8.3.1.2 with the following:

“The site preparation such as clearing, grubbing, the removal of large trees or the removal and stockpiling of topsoil is required, the provisions and scheduled items of SANS 1200 C shall apply.”

PSD 8.3.2 Bulk excavation

Replace the contents of this item with the following:

a) “Excavate in all materials and use within freehaul distance for:

- Bulk Earthworks, Roads and Platforms, compacted to 98% Mod AASHTO Unit: m³
- Pond Embankments, compacted to 98% Mod AASHTO Unit: m³

The tendered rates above shall cover the cost of complying with all the precautions required in terms of Subclause 5.1 of SANS 1200 D (as amended), in addition to the cost of excavating in all materials, basic selecting, loading, transporting within the applicable free-haul distance, off-loading, spreading or backfilling, watering, compacting, final grading, complying with the

requirements for tolerances, providing for testing, finishing and tidying, all in accordance with the specifications.

The unit of measurement shall be the cubic meterage measured in place in accordance with Subclause 8.2 of SANS 1200 D.

b) Extra over for

- 1) intermediate excavation - **No additional payment will be made for intermediate excavation**
- 2) hard rock excavation Unit: m3
- 3) Boulder excavation, Class A Unit: m3

The rates above shall cover the additional cost of the operations enumerated in (a) above for any portion of the excavation that is classified as hard rock or boulder Class A, as applicable (See Drawing D-2).

c) Cut to spoil Unit: m³

The unit of measurement shall be the cubic metre of material excavated, measured in place in accordance with Subclause 8.2 of SANS 1200 D.

The tendered rates shall cover the cost of complying with all the precautions required in terms of Subclause 5.1 of SANS 1200 D (as amended), in addition to the cost of excavating, basic selecting, loading, transporting within the applicable free-haul distance, off-loading at the spoil site, maintaining and finishing the spoil site, all in accordance with the specifications.”

d) Use stockpile material within freehaul distance for:

- Bulk Earthworks, Roads and Platforms, compacted to 98% Mod AASHTO Unit: m³
- Pond Embankments, compacted to 98% Mod AASHTO Unit: m³

The tendered rates above shall cover the cost of complying with all the precautions required in terms of Subclause 5.1 of SANS 1200 D (as amended), loading from stockpile, transporting within the applicable free-haul distance, off-loading, spreading or backfilling, watering, compacting, final grading, complying with the requirements for tolerances, providing for testing, finishing and tidying, all in accordance with the specifications.

The unit of measurement shall be the cubic meterage measured in place in accordance with Subclause 8.2 of SANS 1200 D.

PSD 8.3.3 Restricted excavation

Replace the words “in 1 m increments” at the end of the second sentence of sub-item (a) with “in the increments indicated in the Bill of Quantities”.

Replace “in 5.2.2.1 – 5.2.2.3 (inclusive)” at the end of subclause (a) with “in Subclauses 5.2.2.1 to 5.2.2.5 (inclusive)”.

Add the following:

“Depths of excavation for individual structures (restricted excavation) will be measured from the level of the completed bulk earthworks excavation level.”

Add the following sub-item

“c) Extra over sub-item 8.3.3 (a) for hand excavation Unit: m³

This item shall apply to hand excavation ordered by the Employer’s Agent or when the Employer’s Agent considers that, owing to circumstances, excavation by mechanical excavators is not practicable. It shall not apply to hand excavation for trimming or finishing an excavation made by mechanical means.

The tendered rate shall include full compensation for the additional cost of excavating by means of hand tools.”

PSD 8.3.4 Importing of materials

Add the following:

Ground treatment in Areas of Fill, the fill material shall be selected granular material imported to site (G8, TRH14 refers), placed in thin layers not exceeding 250mm when loose, compacted to 93% of Mod AASHTO maximum dry density at approximately 1-2% (wet/dry) of OM, up to finished terrace levels.

(a) The material shall be subject to the approval of the Employer’s Agent.

PSD 8.3.6 Overhaul

Add the following:

“No overhaul shall apply to material from commercial sources or excavated from Zone 1 or 2 or transported within Zone 1 or 2 (as shown on Diagram under Clause C3.1 Project Description and Scope of Contract).

PSD 8.3.8 Existing services

PSD 8.3.8.1 Location

Replace item 8.3.8.1 with the following:

PSD 8.3.8.1 Hand excavation for locating and exposing existing services:

a) In all areas Unit: m³

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

The tendered rates shall cover the cost of excavating in all materials by means of hand tools within authorised dimensions and at locations approved by the Employer’s Agent in accordance with the requirements of Subclause PSA5.4.1 for all precautionary measures necessary to protect the services from damage during excavation and backfilling, and for subsequent backfilling and compacting. Compaction of material in all areas except in roadways shall be to 90% of the modified AASHTO density.

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

The tendered rates shall also include for keeping excavations safe, for dealing with surface and subsurface water, for removing surplus excavated material from the site, for transporting all material within the free-haul distance, and for supplying adequate supervision during both

excavation and backfilling operations.”

PSD 8.3.10 Topsoiling

Change the unit to “m³” and replace the contents of this item with the following:

“The unit of measurement shall be the cubic metre and the quantity shall be calculated from the authorised dimensions.

The tendered rate shall include loading of the topsoil from stockpiles, transporting it for the free-haul distance, and off-loading, spreading, shaping and lightly compacting the topsoil.”

PSD 8.3.11 Grassing or other vegetal cover

Unit: m²

Add the following:

Handplanting

Hand planting shall be with *Cynodon Dactylon*, a sample of which shall be submitted to the Engineer for approval before use.

Create mini contour lines around the steep slope by digging furrows along the contour about 100 mm deep and 300 mm apart in the rows. Add fertilizer and compost pre mixed at the rate of 1 cubic metre of compost mixed with 20 kilograms of 2:3:2 (22) do this operation in the Contractor’s yard, apply this mixture in the quantity of ½ kilogram to every linear metre of furrow.

Lay runners of grass in these furrows and lightly cover the runners with 20mm of soil mixed with the compost fertiliser mixture.

Water must be applied three times a week till the runners have taken and are forming a 70 % cover of the soil. Once this stage of growth is reached then the watering can then be reduced to twice a week. This regime must be maintained for a period of six months after the last section of grass has been planted.

The tendered rate shall include for regular watering and applications of fertiliser, and the supply of all materials, application and establishment until the end of the Defects Liability Period, as well as any re-seeding which may be required to obtain overall full cover.

Hydroseeding

The seedmix for hydroseeding shall be as follows:

Seed mixture @ 31.5 kg/ha:

- i) *Tef* @ 1,5 kg/ha
- ii) *Cynodon Dactylon* @ 30 kg/ha

Seed is to be of the same season, with a guaranteed germination percentage and is to be free from weeds and foreign materials.

All seed supplied shall be labelled in accordance with the Government Seed Act No. 20 of 1961 and the Contractor shall produce such certification and seed samples as the Employer’s Agent may require to verify compliance with the Act and test the seed.

Prepare surface of soil by cultivation/raking or harrowing as appropriate until ground is broken down to an approved fine tilth 75mm deep and uniformly firmed to finish at the correct levels.

Any stones exceeding 50 mm in any direction shall be removed from the surface to tip.

Prepared surface is to be approved and lightly moistened prior to seeding.

Grass seed shall be applied evenly over the entire working area, during wind-still weather conditions. The Seed mix shall be applied mixed with water via a tanker or other suitable approved seeding / broadcasting equipment.

Acceptable cover will be deemed to have been attained, only once 85 % of the total hydroseeded area is covered with most of the specified grass species, six months after hydroseeding occurred, and there are no bare patches of greater than 0.25 m² in area. Once acceptable cover has been attained final completion will be granted.

The tendered rate shall include for regular watering and applications of fertiliser, and the supply of all materials, application and establishment until final completion, as well as any re-seeding which may be required to obtain overall full cover.

Watering

The Contractor shall ensure that seed after being sown is kept continually moist, until germination and establishment, after which normal irrigation methods are to be applied until the end of the Defects Liability Period.

Defects Liability Period

Maintenance during the Defects Liability Period shall also include the repair of erosion damage to the grassing area during the establishment period.

PSD 8.3.12 Road traffic signs and markings

Replace the word "Separate" in the first sentence of item 8.3.12 with the following:

"Where the Employer's Agent requires the provision of road traffic signs and/or road markings and/or any other measures additional to those to be provided by the Contractor in accordance with Subclause 5.1.6, separate..."

Add the following items in Subclause 8.3

PSD 8.3.14 Excavation in all materials and stockpile suitable material

Unit: m³

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

The tendered rate shall include for the excavation costs, off-loading, forming and maintaining the stockpile for as long as is required, within the applicable free-haul distance to the stockpile.

Payments to the Contractor under this item will only be made in respect of that material stockpiled on the instructions of the Employer's Agent (which instruction shall state specifically that payments for such stockpiling will be paid for under the relevant item) and no payments

will be made to the Contractor under this item in respect of materials stockpiled by the Contractor on his own volition, nor for materials necessarily stockpiled by the Contractor in consequence of the sequence of operations adopted by him in the course of executing the works, whether such stockpiling was avoidable or otherwise.

The Contractor shall in all excavations and placing in stockpiles be selective in order to prevent contamination of usable material with unsuitable material. No extra payment will be made in this regard and all costs related to this shall be deemed to be covered in the rates for the relevant item. The Contractor shall remove all subsequently contaminated material, unsuitable for further use on the site of works, and replace it with material of the same quality as that of the usable in situ material, all at his own cost.

PSD 8.3.15 Soilcrete

Unit : m3

The volume will be computed from the dimensions given on the drawing or ordered by the Employer's Agent. The rate shall cover the cost of dealing with any excavations (in all materials including disposal of surplus) that is additional to that measured under the item for excavation and the cost of backfilling the excavation in soilcrete.

Soilcrete shall comply with the requirements of Subclause PSDB3.5(d)."

PSDB: EARTHWORKS (PIPE TRENCHES)

(Applicable to SANS 1200 DB - 1989)

PSDB EARTHWORKS (PIPE TRENCHES)**PSDB 3 MATERIALS****PSDB 3.5 Backfill Materials***Add the following paragraphs to Subclause 3.5:*

"c) Cement-stabilized backfilling

Backfilling shall, where directed by the Employer's Agent, be stabilized with 5% cement. The aggregate shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed with 5% cement and shall be compacted in layers of 100 mm thick to 90% of modified AASHTO density.

d) Soilcrete backfilling

The aggregate for soilcrete shall be mixed with 5% cement and shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed in a concrete mixer with the cement and enough water to acquire a consistency that allows the mixture to be placed with vibrators to fill all voids between the pipe and the sides of the trench. Shuttering shall be used where necessary."

PSDB 3.7 Selection

Replace the words "if he so wishes" in the first line of the second paragraph with the words "at his own cost."

PSDB 5 CONSTRUCTION**PSDB 5.1 Precautions****PSDB 5.1.3 Accommodation of traffic and access to properties**

Replace the semicolon and the word and at the end of Subclause 5.1.3(a) with a full stop and replace item (b) with the following:

"b) Where necessary to achieve compliance by the Contractor with his obligations in terms of PS7.4 of Portion 1 of the Project Specifications to provide and maintain pedestrian and vehicular access to properties affected by the works, the Contractor shall construct and maintain to the satisfaction of the Employer's Agent, such temporary access roads around, and/or steel or timber bridges over excavations in roads, pavements, entrances or accesses to properties.

Temporary pedestrian access bridges shall be at least 1,2 m wide and temporary access bridges for vehicles shall be at least 3,6 m wide. All temporary access bridges shall be fitted with handrails as well as protective mesh fencing on both sides.

On completion of the work, the Contractor shall dismantle and remove all such temporary constructions and reinstate these areas to their former condition.

Except only where the Employer's Agent has included in the Bill of Quantities, particular payment items specifically therefore, the Contractor will not be paid directly for the construction and maintenance of temporary access roads and/or the provision and maintenance of bridges as aforementioned, and the costs thereof shall be deemed included in the Contractor's tendered

rates for excavation.”

Add the following new subclause to Subclause 5.1:

PSDB 5.1.5 Removal of existing pipelines

Where existing pipes have to be removed, they shall be carefully opened up by machine excavation to 300 mm above the pipes after which the whole pipe shall be fully exposed by means of hand excavation. The excavation width shall comply with Subclause 8.2.3.

The pipes shall be removed from the trench in a manner approved by the Employer’s Agent, and brought to the surface for inspection by the Employer’s Agent.

Pipes that are declared suitable for reuse and pipes declared unfit for reuse shall be dealt with in an applicable manner described in the specifications, or on the Drawings or on the Employer’s Agent’s instructions, as relevant.”

PSDB 5.6 Backfill

PSDB 5.6.2 Material for Backfilling

Further to and notwithstanding the requirements of the Departmental Specification, Part DB, the following requirements in respect of trench excavation, backfilling and reinstatement shall be adhered to:-

It is considered that portion of the excavated material will not comply with the specification for material suitable for backfilling. It will be the Contractor’s responsibility to use selective methods of excavation to ensure that this unsuitable material does not contaminate other materials suitable for reuse.

Items have been included in the Bill of Quantities for disposal of unsuitable material and the Contractor’s rate for these items should include for loading direct into the transport for disposal to tip without stockpiling on site. The measurements for excavation shall be the total through-length along the centre-line of a pipeline measured HORIZONTALLY with deductions for manholes.

In addition, trench depth will be measured vertically on the centre-line of the pipeline from the existing ground level to the invert level.

PSDB 5.6.3 Disposal of soft excavation material

Replace the words “unless otherwise required in the project specification” at the end of subclause 5.6.3 with:

“... or to spoil in accordance with the requirements of Subclause PSD5.2.2.3, as instructed by the Employer’s Agent.”

PSDB 8 MEASUREMENT AND PAYMENT

PSDB 8.3 Scheduled Items

PSDB 8.3.2 Excavation

- a) **Excavate in all materials, for trenches, backfill compact and dispose of surplus material**

Replace “of 1.0 m” in the first sentence of 8.3.2(a) with:

“as specified in the Bill of Quantities.”

b) Extra over item (a) above for:

Add the following at the end of the existing sub-item 2:

“No payment will be made for intermediate excavation under sub-item (1), nor under sub-items (1) and (2) in respect of any materials measured and paid for under sub-item 3 below.”

And add the following new sub-items in 8.3.2(b):

“3) Hand excavation where ordered by the Employer’s Agent in:

- | | |
|--------------------------|----------------------|
| a) Soft material | Unit: m ³ |
| b) Intermediate material | Unit: m ³ |
| c) Hard material | Unit: m ³ |

The unit of measurement shall be the cubic metre of material, measured in place according to the authorised dimensions, which was excavated by hand on the specific prior written instructions of the Employer’s Agent; provided always that the Employer’s Agent’s said instruction shall have stated that measurement and payment for such hand excavation will be in accordance with this item.

The tendered rate shall include full compensation for the additional cost, effort and time resulting from excavating in the respective materials using hand methods only.

The Employer’s Agent shall not be obliged to authorise payment under this item in respect of any hand excavation carried out (whether ordered in writing or otherwise), which hand excavation was in any case necessary to achieve compliance by the Contractor with his obligations under the Contract to –

- a) utilise construction appropriate to the nature of the specific parts of the works; and/or
- b) protect existing structures and/or services; and/or
- c) comply with all prevailing legislation and regulations.

4) Backfill stabilized with 5% cement where directed by the Employer’s Agent Unit:

m³

The unit of measurement shall be the cubic metre of backfill material, measured in place after compaction according to the authorised dimensions, which was stabilized on the Employer’s Agent’s instructions in accordance with Subclause PSDB3.5(c).

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing, backfilling and compacting the stabilized material to 90% of modified AASHTO density.

5) Soilcrete backfill where directed by the Employer’s Agent Unit: m³

The unit of measurement shall be the cubic metre of soilcrete placed on the Employer’s Agent’s instructions in accordance with Subclause PSDB3.5(d), measured in place according to the authorised dimensions.

The tendered rate shall include full compensation for supplying the cement and for

selecting, mixing and placing the soilcrete as well as for the cost of shuttering if required.”

Add the following Sub-items in 8.3.2 after Sub-item 8.3.2(c):

- d) Excavate in all materials beyond specified minimum trench base width for manholes, catchpits, valve chambers and the anchor blocks and beams, cut off collars and backfill around structures:** Unit: m³

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised dimensions, and excluding the volume of material excavated and paid for under sub-item (a).

The tendered rate shall include for the costs of excavating in all materials, backfilling, compacting, trimming and tidying the final surface around the structure, disposing of surplus and unsuitable materials within the free-haul distance and, where applicable, selecting and keeping separate, excavated material suitable for use as backfill compacted to 90% of modified AASHTO around the structures.

- e) Extra over sub-items (d) for excavating in:**
- 1) Intermediate material Unit: m³
 - 2) Hard rock material Unit: m³

Measurement and payment shall be in accordance with the provisions of 8.3.2(b) of SANS 1200 D (as amended).”

PSDB 8.3.3 Excavation ancillaries

PSDB 8.3.3.3 Compaction in road reserves

Replace the heading of this sub-item with the following:

PSDB 8.3.3.3 Compaction in road crossings

Replace the sentence, “The volume will be measured as specified in 8.2.2, 8.2.3 and 8.3.3.1,” with the following:

To determine the volume in the case of gravel roads, the depth will be measured from the underside of the gravel wearing course to the top of the fill blanket, and in the case of bitumen roads, from the underside of the subbase to the top of the fill blanket.

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

PSDB 8.3.3.4 Overhaul

Replace the contents of this item with the following:

“Measurement and payment shall be in accordance with Subclause PSD5.2.5, overhaul is to be included in the rate. No additional compensation for overhaul will be payable.”

PSDB 8.3.7 Accommodation of traffic

Replace the heading and contents of item 8.3.7 with the following:

“PSDB 8.3.7 Accommodation of traffic Unit: Sum

The tendered sum shall, (except where particular items are scheduled to cover particular

costs) include full compensation for compliance with the requirements of 5.1.3 of SANS 1200 DB (as amended), including the construction and maintenance of bypasses and the use of existing roads as bypasses during the construction period.

It shall also include full compensation: for the provision, maintenance and removal of all traffic control measures, including temporary traffic signs, road markings, lighting, barricading, flagmen and, where necessary, communications equipment to regulate traffic; for the construction of temporary drainage works; for the maintenance of drainage works; and for arrangements for moving and subsequently reinstating services for the purposes of accommodating traffic, attending to traffic problems and complying with the requirements of the Road Traffic Ordinance and the relevant local authorities.

The tendered lump sum shall not be adjusted in the event of any extension of time for completion being granted by the Employer's Agent in accordance with Clause 5.12 of the General Conditions of Contract.

Payment shall be made in equal monthly instalments over the entire period allowed for completion, provided that where any extension of time for completion is granted, the amount which shall be payable under this item in any subsequent monthly payment certificate shall be the outstanding unpaid amount of the lump sum, divided by the number of months remaining until the due completion date of the Contract, as revised in accordance with the General Conditions of Contract.”

SANS 1200 DE : SMALL EARTH DAMS

PSDE 1	SCOPE
PSDE 1	SCOPE Add the following to DE 1.1: This specification also cover the cladding of the dam with a geo-membrane.
PSDE3	MATERIALS
PSDE 3.2	CLASSIFICATION FOR PLACING PURPOSES
PSDE 3.2.1	Earthfill Material Replace paragraph (b) of DE 3.2.1 with the following: b) shall comply with the requirements for the various embankment zones, as shown on the drawings. Material for the retention dam shall be obtained from borrow pits or street and trench excavations, as indicated by the Employer's Agent on site.
PSDE 3.3	SELECTION
PSDE 3.3.1	General Replace DE 3.3.1 with the following: Material to be used for the construction of the Attenuation Pond shall be of a homogeneous nature and only underlying clay from the site, in positions as indicated by the Employer's Agent, shall be used. The Contractor shall in all excavations be selective in order to prevent contamination of usable material with unsuitable material. No extra payment will be made in this regard and all costs related to this shall be deemed to be covered in the rates for the relevant items. The Contractor shall remove all subsequently contaminated material, unsuitable for further use on the site of works, and replace it with material of the same quality as that of the usable in situ material, all at his own cost.
PSDE 3.3.3	Fill Materials Add the following at the end of the first sentence of DE 3.3.3: "and from designated borrow pits"
PSDE 3.4	GEOTEXTILE MEMBRANE The geotextile membrane shall consist of a high density polyethylene copolymer (Hi-driline or similar approved) on rolls of at least 6.5 mm wide and a thickness of 500, 750 or 1 000 micrometers. The cladding material shall be welded together on site by using a continuous extrusion/fusion method to ensure an integrated and homogeneous joint that will withstand a shear test.
PSDE 5	CONSTRUCTION
PSDE 5.2	METHODS AND PROCEDURES
PSDE 5.2.2	Excavation
PSDE 5.2.2.3	Borrow pits Add the following to DE 5.2.2.3: The position of the designated borrow pit will be indicated during the site inspection.

- PSDE 5.2.2.4 **Disposal**
Add the following to DE 5.2.2.4:
Surplus and unsuitable material shall be disposed of at the dumping site.
- PSDE 5.2.3 **Placing And Compacting**
PSDE 5.2.3.1 **Lines and grades**
Substitute the second sentence of DE 5.2.3.1 with the following:
The Contractor shall allow for settling during construction to ensure that the final crown level is the same as that shown on the drawings. (See DE 8.2.1).
- PSDE 5.2.3.2 **Embankment**
Add the following to DE 5.2.3.2(d):
Fill shall be compacted to a minimum density of 95% Mod AASHTO density at a minimum moisture content of 3 % above the optimum moisture content.
- DE 5.2.5 **Transport for Earthworks**
PSDE 5.2.5.1 **Free-haul**
Substitute DE 5.2.5.1 with the following:
The provisions of D 5.2.5.1 shall apply mutatis mutandis.
- PSDE 5.2.5.2 **Overhaul**
Substitute DE 5.2.5.2 with the following:
The provisions of D 5.2.5.2 shall apply mutatis mutandis.
- PSDE 5.2.6 **Anchoring and Sealing**
Anchoring and sealing of watertight membranes to pipes and concrete structures shall be carried out according to the manufacturer's approved prescriptions.
- The manufacturer shall inspect and approve the surface of the structure before the membrane is laid. The surface shall be level and firm.
- PSDE 5.3 **MODIFICATION**
PSDE 5.3.1 **Application Rate**
Gypsum shall be applied at a rate of 2 % of the maximum Proctor density, except where otherwise ordered by the Eng/PM.
- PSDE 5.3.2 **Preparation of Layer**
The material to be modified shall be spread out on the designated line and level.
- PSDE 5.3.3 **Application of Gypsum**
The stabilising agent shall be applied at the specified application rate to the full width of the layer.
- PSDE 5.3.4 **Mixing of Gypsum, Watering and Compacting**
After the gypsum has been applied to the full width of the layer, it shall be mixed into the full depth of the material that has to be stabilised. Care must be taken to prevent mixing the gypsum with the underlying compacted layers. The mixing process shall be continued as long as necessary to achieve a uniform mixture.
- The moisture content of the mixture shall be determined after the gypsum has been mixed

in and water shall be added if necessary, to give the material a moisture content of 2 % above optimum moisture content. The layer shall then be compacted to the specified standard and the loss of moisture due to evaporation shall be supplemented with a light water spray.

Modification shall not be done in wet weather or when the wind speed is high enough to negatively affect the work.

PSDE 8 **MEASUREMENT AND PAYMENT**

PSDE 8.3 **SCHEDULED ITEMS**

PSDE 8.3.3 **Excavation**

a) Material unsuitable for embankment Unit : m3
Substitute "in the dam basin" in DE 8.3.3(a) with "or to spoil site".

PSDE 8.3.8 **Overhaul**

Substitute DE 8.3.8 with the following:
The provisions of D 8.3.6 shall apply mutatis mutandis.

PSDK: GABIONS AND PITCHING
(Applicable to SANS 1200 DK - 1996)

PSDK
PSDK3
PSDK3.1.1.1

GABIONS AND PITCHING
MATERIALS
Quality

Add to the subclause:

“The stone shall be subjected to the weathering test as per sub clause 7.3. The stone shall be subjected to the durability test as per sub clause 7.4.”

PSDK3.1.2

Size

Add to the subclause:

“The type of pitching stone to be used at various locations shall be Extra Heavy, Heavy, Ordinary or Light as specified hereunder:”

PSDK3.1.3

Geotextile

Add to the subclause:

“Geotextiles shall be as shown on the drawings and/or scheduled in the Bill of Quantities.”

Add to the following new subclause:

PSDK 3.1.6

PVC Coating

The wire used for the fabrication of wire mesh cages and for lacing and bracing operations shall be galvanised (zinc coated) and PVC-coated in full conformity with Subclause 3.1.2.”

Add to the following new Subclause:

PSDK 3.1.7

Wire Mesh, Lacing and Bracing Wire

Wire netting for gabion and mattress cages shall be hexagonal steel wire mesh strengthened by selvages of heavier wire and by mesh diaphragms which divide the cages into compartments (see PSDK 5.1.3 below).

Nominal 80 mm mesh shall be used for gabion cages, with 2,4 mm dia. steel wires, galvanised and PVC-coated.

Nominal 60 mm mesh shall be used for mattress cages, with 2,0 mm dia. steel wires, galvanised and PVC-coated.

Selvedge wire shall be galvanised and PVC-coated and the diameter shall be in accordance with Subclause 3.2.3.”

PSDK 3.2.1

Stone

Replace the contents of table 2 with the following:

“Table 2: Size and Mass of Individual Stones for Pitching

1	2	3	4
Size/mass of pitching	Thickness of pitching mm, min	Least dimension mm, min	Mass kg, min
Extra heavy	600	300	180
Heavy	400	190	50
Medium	300	150	27

Light	200	110	11
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“

PSDK 3.2.3 Wire netting*Add to the Subclause:*

“The wire netting specified in this Subclause shall be used with stone pitching and not with gabion and mattress cages.”

PSDK 5 CONSTRUCTION*Add the following new Subclauses:***PSDK 5.1.3 Type of cage**

The size of cages for gabions shall be a maximum of 3000 x 1000 x 1000 mm and shall be divided into cells having a volume not greater than one cubic metre. The size of cages for mattresses shall be a maximum of 2000 x 1000 x 300 mm and shall be divided into cells having a volume not greater than 0,3 m3.

PSDK 5.1.4 Diaphragms

Each diaphragm shall be connected in the same manner to the sides and top panels in addition to the bottom panel.”

PSDK 5.2.3 Assembly*Add to the subclause:*

“All gabion and mattress cages shall be connected to adjacent gabion and/or mattress cages by lacing the adjacent selvages together with 2,0 mm dia. galvanised and PVC coated steel wire. The lacing shall be in accordance with Subclause 5.1.2.”

PSDK5.2.4.2 Mattresses used in revetments and aprons*Add to the subclause:*

“Where gabions and mattresses are placed in exposed positions the rock particles forming the exposed faces shall be specially selected so as to present a fair and even surface.”

PSDK 5.3.3 Grouted pitching*Replace the words “(table 4)” in the second line of the first paragraph with “(table 2)”.***PSDK 5.3.4 Wired Pitching***Add to the Subclause:*

“The areas in which wired or grouted wire pitching is to be used are indicated on the drawings.”

PSDK 8 MEASUREMENT AND PAYMENT**PSDK 8.2.3 Extra Over 8.2.2 for Packing Selected Stone for Exposed Face***Add to the Subclause:*

“The method of selecting and packing stone for exposed faces where scheduled shall be as specified in Subclause 5.2.7 - Special Finish.”

SANS 1200 DM : EARTHWORKS (ROADS, SUBGRADE)

- PSPDM 3 **MATERIALS**
 PSDM 3.1 **CLASSIFICATION FOR EXCAVATION PURPOSES**
 Add the following to DM 3.1:
 All in-situ pavement materials shall be classified as soft material for excavation purposes.
- PSDM 3.2 **CLASSIFICATION FOR PLACING PURPOSES**
 PSDM 3.2.3 **Selected Layers**
 Substitute DM 3.2.3 with the following:
 Materials used for selected layers shall comply with the requirements of standard specification 1200 M.
- All imported material underlying the subbase or base of the final road prism, whichever may be applicable, that does not comply with the requirements for lower selected layer or upper selected layer in the respective depth categories, shall be removed and replaced with material complying with the requirements of selected layers, all at the Contractor's expense.
- PSDM 4 **PLANT**
 PSDM 4.2 **PLANT FOR TREATMENT BELOW SELECTED LAYER**
 PSDM 4.2.1 **Pneumatic-Tyred Roller**
 Pneumatic-tyred rollers shall be of the self-propelled type that is equipped with smooth pneumatic-tyred wheels of the same diameter. The mass of the roller shall be at least 10 tons. All wheels must bear the same mass.
- The rollers must be equipped with devices that will be able to keep the wheels wet and clean during operation.
- The wheels of the roller shall be arranged in such a way that one pass with the roller will cover the whole width of the machine. The roller must be able to take a tyre pressure of 600 kPa and the minimum allowed working tyre pressure shall be 450 kPa. The maximum difference in pressure between any two wheels shall not be greater than 35 kPa.
- PSDM 5 **CONSTRUCTION**
 PSDM 5.1 **PRECAUTIONS**
 PSDM 5.1.2 **Accommodation Of Traffic**
 Add the following to DM 5.1.2:
 Bypasses shall be constructed and road signs erected where the free flow of public traffic is restricted. Such bypasses and road signs shall be in accordance with the "CSRA-CUTA : Road Traffic Signs Sub-committee; Road Signs Note no 13, the SA Road Traffic Signs Manual" and shall be approved by the Employer's Agent before the commencement of construction.
- The Contractor shall be required to submit a Traffic Accommodation Plan prior to commencement of Works.
- PSDM 5.2 **METHODS AND PROCEDURES**
 PSDM 5.2.2 **Cut and Borrow**
 PSDM 5.2.2.2 **Dimensions of cuts**

Substitute "subbase" in the second paragraph of DM 5.2.2.2 with "subbase or selected layer, whichever may be applicable", and

Substitute "CBR of at least 7" with "CBR as applicable according to the provisions of PSDM 3.2.3".

PSDM 5.2.2.3 b) Cut to spoil

Substitute DM 5.2.2.3(b) with the following:

All surplus and/or unsuitable material shall be removed from the site and disposed of at the spoil site (as described in PSD 5.2.2.3) and shall be shaped to establish a free-draining surface.

PSDM 5.2.2.4 Temporary stockpiling of materials

Add the following to DM 5.2.2.4:

The Contractor shall program the works in such a manner that suitable excavated material shall, if practically possible, be placed directly in the appropriate position to ensure that temporary stockpiling is limited to an absolute minimum. No payment shall be made for the temporary stockpiling of material where such material is to be used for backfilling of pipe trenches, except when so ordered in writing by the Eng/PM.

PSDM 5.2.3 Treatment of road-bed

PSDM 5.2.3.3 Treatment of road-bed

a) Preparation and compaction of road-bed

Substitute the first paragraph of DM 5.2.3.3(a) with the following:

The road bed shall be scarified to a depth of 150 mm, watered, shaped and compacted to 90 % of MAASHTO density (100 % for sand), except where otherwise ordered by the Eng/PM.

In clay areas only excavation and shaping to the correct level will be necessary.

The road bed shall be prepared with a ionic stabiliser at a rate of 0,03 t/m² in layers of 150 mm and 0,02 t/m² in layers of 100 mm before compaction if ordered by the Eng/PM.

The stabiliser must be thoroughly mixed with water.

Measurement and payment shall be made under item PSME 8.3.8(g).

Add the following subclause:

c) In situ preparation of road-bed with eight roller passes

Any part of the road-bed that lies within the selected layer and which, regardless of its density, is suitable according to the Eng/PM's opinion, can be used in situ if so instructed by the Eng/PM.

If, due to the nature of material, the degree of compaction cannot be controlled by means of in situ density tests, the Employer's Agent may instruct compaction to be done by eight roller passes as specified in PSDM 4.2. The Employer's Agent may further request that the compaction effort be altered by increasing or reducing the number of passes and that payment be amended accordingly.

The surface of the road-bed shall be shaped true in respect of line and level within the tolerances as specified in DM clause 6. During the shaping of the road-bed, all material that has to be removed and cannot be re-used, shall be disposed of and will be paid for under item PSDM 8.3.7. If necessary, additional material that has been

approved by the Employer's Agent shall be imported to meet the required levels.

No strict measurements in connection with soil moisture content will be applied by the Employer's Agent during compaction. The Contractor must however convince the Employer's Agent that all possible efforts have been made to utilise favourable soil moisture conditions. Compaction must be done during periods when the road-bed is not too wet or too dry. The Employer's Agent has full authority to decide whenever conditions are favourable for compaction, and may at any stage instruct the Contractor to water the road-bed at the Contractor's expense if he, in the Eng/PM's opinion, neglected to satisfy the above-mentioned requirements.

PSDM 5.2.5 **Selected layer**

Add the following to DM 5.2.5:

The Employer's Agent may, depending on the quality of the in situ material, order the omission of one or both of the selected layers. To determine the amount of selected layers, if any, the Employer's Agent may order the Contractor to dig test holes with maximum dimensions of 1,5 m x 1,5 m and 1,0 m deep at positions indicated by the Eng/PM, before construction commences.

The Contractor shall backfill all test holes with selected material and compact it to 95 % of Mod AASHTO density, after the Employer's Agent has taken samples and profiled the holes.

PSDM 5.2.9 **Shaping and compacting below selected layer**

Each portion of the road bed below the selected layer which, by virtue of its inadequate natural density, is directed by the Employer's Agent to be compacted by means of a pneumatic-tyred roller, shall be prepared by shaping where necessary, and each such portion shall be compacted by means of at least eight complete passes by a pneumatic-tyred roller. One pass shall consist of the complete area being systematically passed in the longitudinal direction so that each pass overlaps the previous by half.

PSDM 6 **TOLERANCES**

PSDM 6.5 **DIMENSIONS AND LEVEL CONTROL**

The Contractor shall submit to the Eng/PM, in a form acceptable to the Eng/PM, records of dimension and level control, prior to requesting the Employer's Agent to carry out any routine inspections.

PSDM 7 **TESTING**

PSDM 7.2 **PROCESS CONTROL**

Amend table 1 of DM 7.2 as follows:

Substitute "2 000 m²" with "1 500 m²", "1 500 m²" with "1 200 m²" and "5 000 m²" with "3 000 m²".

PSDM 7.3 **ROUTINE INSPECTION AND TESTING**

Substitute DM 7.3.2 with the following:

No density shall be less than the specified minimum density for the relevant layer.

The cost of all routine testing done by the Eng/PM, and of which the results do not comply with the specified minimum requirement for the material, shall be borne by the Contractor and will be subtracted from the monthly payment certificates.

PSDM 8
 PSDM 8.3
 PSDM 8.3.3

MEASUREMENT AND PAYMENT
SCHEDULED ITEMS

Preparation of roadbed-

Substitute DM 8.3.3(b)(1) and (2) with the following:

- b) Preparation of in situ road bed in:
 - 1) Intermediate material Unit : m3
 - 2) Hard rock material Unit : m3

Add the following subclauses:

- (c) In situ preparation of road bed with eight roller passes (pneumatic roller) Unit : m2

The unit of measurement is in square metres of road bed which has been treated with eight roller passes.

The rate shall cover the costs of shaping, watering and compacting all as specified in PSDM 5.2.3.3(c). The removal, disposal, transport and replacing of materials will be paid under the appropriate items.

- (b) Variations in compaction effort (pneumatic roller) Unit : m2.pass

The unit of measurement is the surface on which the variation is applicable multiplied by the amount with which the compaction effort was reduced or increased as instructed by the Employer's Agent.

If there is a change in compaction effort, as instructed by the Eng/PM, the Contractor will be paid as for the standard effort, except that the amount as calculated above will be subtracted or added in the appropriate item.

This rate shall include full compensation for supervision, labour, machines, construction equipment, fuel, material and additional costs necessary for the completion of the process.

PSDM 8.3.4

Cut to fill, borrow to fill Unit : m3

Substitute "90 %" in DB 8.3.4 with "90 % (100 % for sand)" and "road prism" with "road prism and borrow pits".

Add the following:

Separate items will be scheduled for fill in the road prism, fill on spoil areas and fill on erven (where a minimum density for such spoil material is required by the Eng/PM) and fill from the road prism, fill from the site and fill from commercial sources.

The rate for fill from commercial sources shall, in addition to the requirements of DM 8.3.4, cover the cost of the location of the source, complying with all the applicable precautions as set out in DM 5.1, obtaining the material, selection and transport from the source to the point on the road where it is to be used.

(for hand excavation see SANS 1200 D.)

- PSDM 8.3.5 **Selected Layer Compacted to 93 % of MOD AASHTO Density Unit : m3**
 Substitute "93 % of Mod AASHTO density" in the heading of DM 8.3.5 with "93 % (100 % for sand) of Mod AASHTO density".
- Add the following to DM 8.3.5:
 Separate items will be scheduled for lower and upper selected layers as well as for material from the site of works and from commercial sources. The rate for selected layers from commercial sources shall, in addition to the provisions of DM 8.3.5, allow for locating the source, complying with all the applicable precautions as set out in DM 5.1, obtaining the material, selection and transport from the source to the point on the road where it is going to be used. No payment shall be made for the removal and replacement of unsuitable imported material.
- PSDM 8.3.7 **Cut to Spoil or Stockpile From Unit : m3**
 Add the following to DM 8.3.7:
 Payment for temporary stockpiling shall be made under DM 8.3.11, only if so instructed in writing by the Eng/PM.
- (For hand excavation see SANS 1200 D.)*
- PSDM 8.3.12 **Overhaul Unit : m3 or m3.km**
 Substitute DM 8.3.12 with the following:
 The provisions of clause D 8.3.6 shall apply mutatis mutandis.
- PSDM 8.3.17 **Trim, Shape and Compact Sidewalks Unit : m2**
 The area to be trimmed is the unsurfaced area from the back side of the kerbs to the boundary of the road reserve, or such wider area necessitated by the road prism.
- Measurement and payment for the above shall be restricted to areas ordered in writing by the Eng/PM.
- The rate shall cover the cost of trimming and shaping the sidewalks to the lines, levels and dimensions as shown on the drawings, the cost of acquiring additional material to compensate for any material lost due to weather or other reasons, and of the compaction of any loose or disturbed material to 90 % of MOD AASHTO density (100 % for sand).
- PSDM 8.3.18 **Trial Holes Unit : No**
 The unit of measurement is the number of trial holes made at positions indicated by the Eng/PM. The rate shall cover the cost of excavating to a depth of 1 m, as well as costs for backfilling with the excavated material, compacted to 93 % of MOD AASHTO density (100 % for sand).
- The rate shall also include the survey and booking to determine the position of existing services.
- PSDM 8.3.19 **Removal of Unsuitable Material Unit : m3**
 The volume measured for payment is the volume of unsuitable material, removed on written instruction of the Employer's Agent in accordance with clause DM 5.2.3.2, below the level of the initial road-bed.

The rate is extra-over Item PSDM 8.3.7 and covers all additional costs in respect of the removal and spoil of unsuitable material, as well as all additional costs in respect of the backfilling thereof. Payment for backfilling shall be made either under PSDM 8.3.4 or PSDM 8.3.5, whichever may be applicable.

Payment shall differentiate between the areas of the unsuitable material, as measured on the initial road bed, in increments as scheduled.

PSDM 8.3.20 Installation of Reference Marks Unit : No
 The quantity is the number of reference marks installed in streets on positions indicated by the Eng/PM.

The rate shall cover the cost of supplying, excavation, removal of surplus material, installation to the standards as shown on the drawings, backfilling with material that comply with the requirements of the relevant pavement layers, compacting to the specified minimum density for the relevant pavement layers and for the reinstatement of the bituminous surface with 30 mm asphalt.

PSDM 8.3.21 Existing Services that Adjoin Excavation for Streets Unit : m
 The provision of items DB 8.3.5(a) and DB 8.3.5(b) shall apply mutatis mutandis.

PSDM 8.3.22 Existing Services Intersecting Excavation for Streets Unit : No
 The quantity is the number of each service, as indicated in the Bill of Quantities, that intersect the excavation for streets.

Separate items will be provided for the depth increments as scheduled.

The rate for the crossing of services below the level of the road-bed, measured to the top of the service, covers all additional costs in respect of excavation, irrespective of the method, the protection and ensuring of the continuous functioning thereof and the cost of all repair work and/or subsequent costs arising from damage to the service and all other incidentals arising for this activity.

The rate for services that are not fully covered by the road-bed shall, in addition to the abovementioned requirements, cover all additional costs in respect of excavation and backfilling with material as required for the relevant pavement layer as well as for compacting to the specified minimum density of the relevant pavement layer.

Services with a depth of cover of more than 500 mm shall not be measured and paid for.

PSDM 8.3.23 Shaping of Stormwater Channels adjoining Streets Unit : m
 The rate is an extra-over item PSDM 8.3.4 and shall be all inclusive for labour, material and equipment to shape stormwater channels according to the dimensions and grades as shown on the drawings and compaction to 90 % of MOD AASHTO density (100 % for sand). The placing of the gravel layer shall be measured in item PSDM 8.3.24.

PSDM 8.3.24 Construction of Gravel Layer in Stormwater Channels Unit : m3
 There will be differentiated between material from the stockpile and that from the borrow pits. The rate shall be all inclusive for labour, material and equipment necessary for

construction, selection, transport, off-loading and placement according to the specified slopes and dimensions as shown on the plans, as well as for compaction to 93 % of MOD AASHTO density.

SANS 1200 GA : CONCRETE (SMALL WORKS)

PSGA 5	CONSTRUCTION
PSGA 5.2	FORMWORK
PSGA 5.2.1	<p>Classification of Finishes</p> <p>Add the following to GA 5.2.1:</p> <p>The following surface conditions are required on the finished concrete:</p> <p>a) Rough</p> <p>For concealed surfaces and surfaces lower than 100 mm below the finished ground level.</p> <p>b) Smooth</p> <p>All surface finishes not classified as rough in paragraph a) shall be classified as smooth. All exposed arrises, unless otherwise indicated on the drawings, shall be chamfered 20 mm x 20 mm by means of triangular fillets fixed to the formwork.</p>
PSGA 8	MEASUREMENT AND PAYMENT
PSGA 8.1	MEASUREMENT AND RATES
PSGA 8.1.2	<p>Reinforcement</p> <p>Substitute the first paragraph of GA 8.1.2 with the following:</p> <p>Reinforcement shall be measured and paid for by mass. Valuation of variations shall not be applicable.</p> <p>No allowance shall be made for individual reinforcement bar sizes.</p>
PSGA 8.2	SCHEDULED FORMWORK ITEMS
PSGA 8.2.3	<p>Narrow Widths Unit : m</p> <p>Substitute GA 8.2.3 with the following:</p> <p>No payment shall be made for narrow widths.</p>
PSGA 8.3	SCHEDULED REINFORCEMENT ITEMS
PSGA 8.3.2	<p>High-tensile Welded Mesh Unit : kg</p> <p>Substitute GA 8.3.2 with the following:</p> <p>Welded mesh shall be measured and paid for by mass.</p>
PSGA 8.4	SCHEDULED CONCRETE ITEMS
PSGA 8.4.1	<p>Prescribed Mix Concrete Unit : m3</p> <p>Add the following to GA 8.4.1:</p> <p>The rate for installation of concrete slabs shall include for the compaction of the in situ material to 90 % of MOD AASHTO density.</p>
PSGA 8.9	<p>WEEP-HOLES Unit : No</p> <p>The rate for installation of weep-holes as shown on the drawings shall include all material, plant and labour.</p>

SANS 1200 L : MEDIUM PRESSURE PIPELINES

- PSL 3 **MATERIAL**
 PSL 3.1 **GENERAL**
 Substitute the first sentence of L 3.1 with the following:
 Types and classes of pipes shall be as scheduled in the Bill of Quantities.
- PSL 3.8.4 **Loose flanges**
 Substitute the first sentence of the last paragraph of L 3.8.4 with the following:
 Bolts and nuts shall comply with the requirements of SANS 135.
- PSL 3.9.5 **Joints, bolts, nuts and washers**
 Substitute L 3.9.5 with the following:
 All joints, bolts, nuts and washers shall be cadmium-plated or stainless steel.
- PSL 3.10 **VALVES**
 PSL 3.10.1 **Gate valves**
 All gate valves shall comply with the requirements of SANS 664 and shall be suitable for a working pressure of 1,6 MPa. All gate valves must be supplied with a square spindle nut, suitable to be used with a valve key.
- Gate valves up to 200 mm dia shall have spigot ends or be plain ended. Valves over 200 mm dia shall be flanged. Valves shall open clockwise. The direction for opening and closing shall be permanently displayed on the valves. Valves shall have non-rising spindles.
- Resilient seal valves must be used for valves up to 300mm dia, and wedge gate valves for valves over 300mm dia. Valves shall be as specified on the drawings. All flanged gate valves shall be drilled according to SANS 1123 Table 1600. Pipes shall not be tested against a closed valve. Thrust blocks for test sections shall be approved by the Eng/PM prior to testing of pipes.
- PSL 3.10.3 **Fire hydrants**
 Fire hydrants shall be as specified on the drawings.
- PSL 3.10.4 **Air valves**
 Air valves for potable water shall be suitable for a working pressure of 1.6 MPa. All air valves shall be double action air valves of Vent-o-mat series RBX or equal approved. On a 500 mm dia or smaller main, a 50 mm air valve shall be fitted and an 80 mm air valve shall be fitted on diameters larger than 500 mm.
- The branch of the tee on the main pipe shall be minimum 0.67 (2/3) of the diameter of the main pipe.
- All air valve installations shall be supplied with an isolating valve and distance piece between the air valve and the branch of the tee, and other fittings shown on the drawings.
- Double-acting air valves shall have large as well as small orifices. The large orifice shall have a rubber bed, and the small orifice a brass bed on which the balls can shut. Double-acting air valves shall be flanged and supplied with flanged isolating valves. Air valves shall be designed

to remain open until all the air has escaped and shall not close due to the speed of the escaping air.

T-pieces for air valves shall be as follows:

Main pipe mm dia	Branch mm dia
250	200
300	200
350	250
400	300
450	300
500	350
600	400
700	500
800	8600
900	600
1 000	700

Air valves for sewers shall be RSC figure valves of stainless steel as supplied by Premier Valves or equal approved. These valves shall be flanged and supplied with a separate flanged gate valve.

PSL 3.10.6 Bulk Water Meter

A provisional sum is provided for the supply and installation of a Bulk Water Meter including all related fittings and a chamber in the Bill of Quantities. The final location and details of the installation including sizing are to be determined on site.

Installation of meter

The meter shall be installed by an installer approved by the supplier, and in accordance with the supplier's specifications, in order to validate the guarantee.

All accessories for the complete installation shall be supplied by the Contractor.

All metal work shall be painted according to specifications after the testing and completion of the installation.

PSL 3.11 MANHOLES AND SURFACE BOXES

PSL 3.11.4 Step Irons

Substitute L 3.11.4 with the following:

Step irons shall consist of polypropylene-coated 12 mm high tensile steel such as Calcamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.

PSL 3.11.6 Surface Boxes

Add the following to L 3.11.6:

The type of cast iron boxes shall be as specified on the drawings.

PSL 4 PLANT

PSL 4.3 TESTING

Add the following to L 4.3
 The Contractor must ensure that the test equipment is in good order and that it is calibrated.

PSL 5 **CONSTRUCTION**

PSL 5.6 **VALVE AND HYDRANT CHAMBERS**

PSL 5.6.1 **General**

Substitute the first sentence of L 5.6.1 with the following:
 The drawings of valve and hydrant chambers which are bound into the document shall supersede the corresponding drawings in the standard specification.

PSL 5.9 **LIFTING AND RELAYING OF EXISTING PIPES**

Add the following to L 5.9:
 Existing water pipes at certain points shall be lifted and relayed deeper in the same position. The Contractor must make timeous arrangements with the local authority or service provider when working on, or in the vicinity of, these pipes.

PSL 7 **TESTING**

PSL 7.3 **STANDARD HYDRAULIC PIPE TEST**

PSL 7.3.1 **Test pressure and time of test**

PSL 7.3.1.1 Add the following to L 7.3.1.1:
 Pipes shall not be tested against isolating valves. Special blank flanges or end caps, fully anchored, shall be provided for testing.

PSL 7.3.1.2 Substitute L 7.3.1.2 with the following:
 The test pressure for field testing shall be 1.5 times the rated maximum working pressure of the pipe.

PSL 7.3.1.3 Substitute L 7.3.1.3 with the following:
 The test pressure applied according to L 7.3.1.2, must, with allowance for any level differences along the pipeline, be such that the pressure at any point in the pipeline will be at least 1.25 times and not more than 1.5 times the rated working pressure of the pipe.

PSL 8 **MEASUREMENT AND PAYMENT**

PSL 8.2 **SCHEDULED ITEMS**

PSL 8.2.3 **Extra-over 8.2.1 for the supplying, fixing and bedding of valves Unit : No**

Add the following to L 8.2.3:
 Valves are measured and paid for per item, complete with the inclusion of the cutting of pipes, couplings, extra excavation and all extra material and labour that is required, including tees, fittings, isolating valves (e.g. under air valves), complete as shown on the drawings. Flanged distance pieces shall be included in the rate for fire hydrants.

PSL 8.2.10 **Temporary valves, etc. Unit : Sum or No**

Substitute L 8.2.10 with the following:
 Temporary valves, end caPSor blank flanges for testing shall be included in the rate for the laying of pipes except where separate items are included in the Bill of Quantities.

PSL 8.2.11 **Anchor/Thrust blocks and pedestals Unit : m3**

Anchor and thrust blocks shall be measured per cubic metre of concrete and the tendered rate shall include for all formwork and reinforcement (where specified) for the required dimensions. The tendered rate shall also include full compensation for all plant, materials

and incidentals required for constructing these thrust blocks and pedestals.

PSL 8.2.14 **Manholes** **Unit : No**

Add the following to L 8.2.14:

Overflow boxes and pipe outlets shall, as in the case of manholes, be measured and paid for per number and shall be all inclusive as shown on the drawings.

PSL 8.2.16 **Cut into and connect to existing mains** **Unit : No**

The cutting into existing mains shall be measured by the number of each type and diameter of pipe cut into.

The tendered rate shall include full compensation for all arrangements with the relevant authorities, isolating the main, cutting into the main to accommodate the connecting fitting, dewatering, excavating, removing of excess material, taking steps to prevent the ingress of soil, stones and other material into the main as well as all material and labour to connect the pipe.

PSL 8.2.17 **Control valves** **Unit : No**

The rate for control valves shall cover the costs for the provision and installation of as described on the drawings. The rate shall also include all cutting of pipes, testing and putting into operation of the control valve. Distinction shall be made between different diameters.

PSL 8.2.18 **Water meters** **Unit : m**

The rate for the water meter shall include full compensation for the provision and installation of items. The rate shall also include all cutting of pipes, testing and putting into operation the water meter.

SANS 1200 LB : BEDDING (PIPES)

PSLB 3

MATERIALS

PSLB 3.1

SELECTED GRANULAR MATERIAL

Substitute LB 3.1 with the following:

Selected granular material shall be an aggregate, sand or granular material, all of a noncohesive nature and free from any organic material, of which the grading analysis shows 100 % passing a 13,2 mm sieve and not more than 5 % passing a 0,075 mm sieve.

In very wet conditions and if so ordered by the Employer's Agent, a non plastic crushed material with the specification as stated underneath should be used for bedding cradle.

a) Grading

Sieve size (mm)	% going through
19,0	100
13,2	84 - 100
9,5	70 - 84
4,75	45 - 65
2,36	29 - 47
1,18	19 - 33
0,600	13 - 25
0,300	10 - 18
0,150	6 - 13
0,075	4 - 10

b) Crusher value

The aggregate crushing value, calculated at minus 13,2 mm plus 0,5 mm fraction, may not exceed 29.

PSLB 3.2

SELECTED FILL MATERIAL

Substitute LB 3.2 with the following:

The requirements of PSLB 3.1 shall apply mutatis mutandis.

PSLB 3.3

BEDDING

Add the following to LB 3.3:

All pipes shall be classified as rigid pipes and shall be laid on a Class C bedding except water connections which shall be classified as flexible pipes.

PSLB 5

CONSTRUCTION

PSLB 5.1

GENERAL

PSLB 5.1.4

Compacting

Substitute "90 % of MAASHTO" in LB 5.1.4 with "93 % of MAASHTO (100 % for sand)".

PSLB 8

MEASUREMENT AND PAYMENT

PSLB 8.1

PRINCIPLES

PSLB 8.1.1

Supply of Bedding Materials Measured Separately

Add the following to LB 8.1.1:

Payment for bedding material and selected fill material is only made if the selected trenchexcavation material cannot be used within 50m as bedding material but has to be obtained from another part of the site of works or designated borrow pits, or from

commercial sources.

PSLB 8.1.4 Separate Items for Cradle and Blanket

Substitute LB 8.1.4 with the following:

No distinction shall be made as regards material for the bedding cradle and selected fill blanket, and the material shall comply with the requirements for material for bedding cradle.

PSLB 8.1.5 Disposal of Displaced Material

Add the following to LB 8.1.5:

Surplus displaced material shall be dumped and levelled at the dumping site as described in PS.

PSLB 8.2 SCHEDULED ITEMS

PSLB 8.2.2 Supply Only of Bedding by Importation

PSLB 8.2.2.3 From commercial sources

Add the following to LB 8.2.2.3:

c) Bedding for wet conditions Unit : m3

The requirements of PSLB 3.1 for bedding in wet conditions must be noted. Payment will only be applicable if ordered by the Employer's Agent.

PSLB 8.2.2.4 From stockpile (provisional)

a) Selected granular material Unit : m3

b) Selected fill material Unit : m3

The rate shall cover the cost of obtaining, handling and transport regardless the distance, of the required bedding material from the stockpile, the delivery thereof at positions that are spaced along the trench in such a way as suits the working method of the Contractor, as well as the removal of material displaced by this importation within a free-haul distance of 0,5 km.

PSLB 8.2.5 Overhaul of Material for Bedding Cradle and Selected

Fill Blanket Unit : m3.km

Substitute LB 8.2.5 with the following:

a) Limited overhaul Unit : m3

b) Long overhaul Unit : m3km

Except that the volume is calculated according to LB 8.1.3, the requirements of D 8.3.6 or DA 8.3.3, as applicable, shall apply for overhaul.

SANS 1200 LC : CABLE DUCTS

- PSLC 3 **MATERIALS**
 PSLC 3.1 **DUCTS**
 Add the following to LC 3.1:
 Class 6 uPVC pipes (dia 110 mm or 160 mm) shall be used as ducts for electric cables under streets. Ducts for Telkom shall be of pitch-impregnated fibre pipes.
- PSLC 3.2 **BEDDING**
 Substitute LC 3.2 with the following:
 The provisions of SANS 1200 LB : Bedding (Pipes) and the relevant project specification shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SANS 1200 LB.
- PSLC 3.3 **BACKFILL**
 Substitute LC 3.3 with the following:
 The provisions of SANS 1200 DB : Earthworks (Pipe Trenches) and the relevant project specification shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SANS 1200 DB.
- PSLC 3.4 **CABLE DUCT MARKERS**
 Add the following to LC 3.4:
 Cable duct markers shall be provided as specified in PSLC 5.10.
- PSLC 5 **CONSTRUCTION**
 PSLC 5.1 **EXCAVATION OF TRENCHES**
 PSLC 5.1.1 **Trench Widths and Depths**
 Add the following to LC 5.1.1:
 Trench widths shall be in accordance with the provisions of SANS 1200 DB : Earthworks (Pipe Trenches).

 The minimum depth of cover over ducts shall be 600 mm from the final road level.
- PSLC 5.1.3 **Excavation of Trenches at Road Crossings**
 The minimum depth of cover over ducts shall be 300 mm where construction traffic is liable to cross them. Road crossings shall therefore be constructed after the construction of the roadworks has reached the stage where the required cover is available.
- PSLC 5.2 **BEDDING AND COMPACTION OF BEDDING**
 Substitute LC 5.2.1 and LC 5.2.2 with the following:
 All ducts shall be laid on a Class C bedding according to the provisions of SANS 1200 LB : Bedding (Pipes). Backfilling shall be according to the provisions of SANS 1200 DB : Earthworks (Pipe Trenches).
- PSLC 5.4 **BACKFILLING AND COMPACTION**
 Add the following to LC 5.4:
 Road crossings shall be backfilled with sand from designated borrow pits, the site or commercial sources, whichever is applicable, up to underneath the subbase, and compacted to a minimum of 100 % of MAASHTO density.

- PSLC 5.8 **ROAD CROSSINGS**
Substitute "0,5 m" in the last sentence of LC 5.8 with "1,0 m" and add the following:
Ducts for road crossings shall be effectively sealed by means of end caps.
- PSLC 5.10 **POSITION TO BE MARKED**
Add the following to LC 5.10:
The lettering height shall be at least 70 mm.
The positions of ducts shall be marked by means of incisions on top of the kerb. The dimensions of such incisions shall be at least 40 mm long, 3 mm wide and 5 mm deep and the spacing, where more than one incision is required, shall be 20 mm. Ducts for Telkom crossings and electrical crossings shall be marked with green and red painted incisions respectively.

The draw wire, as specified in LC 5.3.3, shall be secured to a 150 x 150 x 150 mm grade 20 MPa/19 mm concrete marker, which shall be installed with a depth of cover of 50-100 mm below the final level.
- PSLC 5.12 **DRAW AND JOINT BOXES FOR COMMUNICATION CABLES**
Draw and joint boxes shall be constructed strictly in accordance with the positions and details given on the plans.
- PSLC 7
PSLC 7.2 **TESTING**
COMPACTION TESTS
Substitute LC 7.2 with the following:
The Contractor shall, for at least one out of every five road crossings, submit density tests to the Employer's Agent at his own expenses. The decision as to which road crossing densities shall be tested, rests with the Employer's Agent. The Contractor shall, if such densities fail to meet the minimum requirements, prove at his expense that all the other densities do comply with the specified minimum requirements.
- PSLC 8
PSLC 8.2
PSLC 8.2.5 **MEASUREMENT AND PAYMENT**
SCHEDULED ITEMS
Supply, Lay, Bed and Prove Duct Unit : m
Substitute "GPO" in LC 8.2.5(a) with "Telkom".
Add the following to LC 8.2.5(a):
The rates for the installation of Telkom distribution ducts parallel to streets shall first be submitted by the Employer to Telkom for approval. The installation of these ducts will only form part of this contract if approved by Telkom.
- PSLC 8.2.8 **Cable Markers Unit : No**
Substitute LC 8.2.8 with the following:
The rate shall also cover the cost of the end cap and the incisions, concrete marker and draw wire, as specified in PSLC 5.10.

SANS 1200 LD : SEWERS

- LD 3 **MATERIALS**
- PSLD 3.5 **MANHOLES, CHAMBERS, ETC.**
- PSLD 3.5.2 **Precast Concrete Sections**
 Add the following to LD 3.5.2:
 Precast concrete sections with an inside diameter of at least 1 000 mm shall be used for manholes. Diameters may vary between 1 000 mm, 1 250 mm and 1 500 mm, as stated in the Bill of Quantities and on the Drawings.
- Where the angle between the inlet and outlet of the manhole deviates by more than 45 ° from the straight or where more than one inlet enter a manhole, the invert level of the outlet shall be 30 mm lower than the lowest inlet invert level.
- Two types of manhole lid shall be used. Where the sewer manhole is positioned on the road surface, a heavy duty steel type 2A to be used and where the sewer manhole is positioned on the road reserves, a heavy duty concrete cover to be used. Sectional spun concrete cylinders shall have been manufactured from dolomitic aggregate.
- PSLD 3.5.7 **Step Irons**
 Substitute LD 3.5.7 with the following:
 Step irons shall be installed in all manholes deeper than 1,2 m. Step irons shall consist of polypropylene coated 12 mm high tensile steel, such as Calcamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.
- PSLD 5 **CONSTRUCTION**
- PSLD 5.4 **CONNECTIONS TO MANHOLES**
 Add the following to LD 5.4:
 If the gradient of a pipe is more than 1:10, a vertical bend shall be used to connect up to the manhole. The Contractor shall take care that no low point is formed in the pipe as a result of the bend. If a pipe lies at a gradient of 1:10 (5,71°), a 11,25° bend cannot be used since a bend with an angle larger than the grade of the pipe will result in a low point. It is the responsibility of the Contractor to shorten the bend in order to create the required angle.
- For pipes with a gradient of up to 1:10, the angle can be taken up by a joint in the manhole and if required, also by the joint between the short-length and first full pipe.
- PSLD 5.6 **MANHOLES, INSPECTION CHAMBERS, ETC**
- PSLD 5.6.4 **Brick Manholes**
 Add the following to LD 5.6.4.3:
 Walls of brick manholes shall be plastered internally as shown on drawing LD-3. External plaster work shall extend to at least 150 mm below ground level. Manholes shall not be extended above the concrete roof slab by more than 300 mm with brickwork.
- If manhole covers are raised with bricks, a half-brick recess, as a foothold, shall be left directly above the concrete slab above the step irons.
- PSLD 5.9 **CONNECTING SEWERS**
- PSLD 5.9.1 **Location and Details**

Add the following to LD 5.9.1:

Erf connections shall be installed on the exact positions as indicated on the drawings and shall extend 1 m into the erf where it shall be blanked of with an end cap.

All connecting sewers shall be laid at a gradient of 1:60, except where otherwise ordered by the Eng/PM.

This excludes midblock sewers where connections on the topographical high side can be laid at steeper gradients to end at a minimum depth of 1,2 m or at such greater depth that any point on the erf is able to be connected.

PSLD 7
PSLD 7.1

TESTS

GENERAL

Add the following to LD 7.1.5:

All tests shall be repeated after the completion of backfilling of pipe trenches.

PSLD 8
PSLD 8.2
PSLD 8.2.6

MEASUREMENT AND PAYMENT

SCHEDULED ITEMS

Erf Connections Unit : No

Substitute LD 8.2.6 with the following:

Erf connections shall be laid up to 1,0 m within the erf boundary.

There will be distinguished between long, medium and short connections.

A long connection consists of a 100 mm dia x 45° junction, a 100 mm dia x 45° bend, 10 m of 100 mm dia pipe with a 100 mm dia end cap with marker.

A medium connection consists of a 100 mm dia x 45° junction, a 100 mm dia x 45° bend, 2 m of 100 mm dia pipe with a 100 mm dia end cap with marker.

A short connection consists of a 100 mm dia x 45° junction, 1 m of 100 mm dia pipe with a 100 mm dia end cap with marker. 150 mm connections shall be the same as above, but 150 mm dia pipes and fittings shall be used.

There will be distinguished between the various connections to different main-pipe diameters, as well as between the various depth increments. The depth increment for the connection shall be determined by the depth of the junction.

The rate shall be all inclusive and shall cover the cost of excavation, backfilling, bedding, pipes and fittings. An extra-over item for variation in pipe lengths is provided for connections, shorter or longer than specified and shall include the necessary excavation, bedding, backfilling, all material, etc. and will be also be measured under depth increments in the Bill of Quantities.

The depth increment for the extra pipe lengths shall be determined by the depth of the end caps. If the deviations are negative, payment shall be reduced accordingly.

The rate for new erf connections on existing sewers shall also cover the cost of additional excavation and backfilling around the mains, cutting of pipes, handling of sewage flow, etc.

Imported material for bedding, fill blanket and main fill shall be measured and paid for under the relevant items for mains.

PSLD 8.2.8 **Anchor Blocks** **Unit : m3**

Add the following to LD 8.2.8:

Payment for anchor blocks shall be made for pipes with gradients steeper than 1:10 and shall be measured in m3.

PSLD 8.2.11 **Connection To Existing Sewers** **Unit : No**

Add the following to LD 8.2.11:

Separate items will be scheduled for each diameter of connecting pipe.

The tendered rate shall include full compensation for connecting the proposed pipe and / or manhole, any additional channelling and benching associated with the connection, cutting the pipe to suit the connection, supplying and building in the short junction pipe, extra couplings, dealing with existing flow, preventing foreign material from entering the sewer and making the connection.

The excavation for pipelines, pipes, backfilling and manholes shall be measured separately.

Where a direct connection is made to an existing pipe, the rate covers all labour involved in opening the existing pipe, the removal of the existing end cap and disconnection at the pipe.

SANS 1200 LE : STORMWATER DRAINAGE

- PSLE 3 **MATERIALS**
- PSLE 3.1 **CULVERT UNITS AND PIPES**
- PSLE 3.1 d) **Skewed Ends**
 Substitute LE 3.1(d) with the following:
 Where pipe culverts are to be constructed with a skew angle of more than 20°, the skew ends shall be cut on site.
- PSLE 3.1 f) **Materials For Subsurface Drains**
- i) Pipes : Perforated or slotted uPVC pipes (normal duty) shall, before perforations or slots are provided, comply with the requirements of SANS 791.
- The size of perforations in perforated pipes shall in all cases be 8 mm in diameter \pm 1,5 mm and the number of perforations per metre shall be not less than 26 for 100 mm pipes and 52 for 150 mm pipes. Perforations shall be spaced in two rows for 100 mm pipes. The centre-lines of all perforations shall be contained within an arc of between 100° and 160°.
- Slotted pipes shall have a slot width of 8 mm \pm 1,5 mm. The arrangement of slots shall be subject to the Employer's Agent's approval, but the total slot area shall be not less than that presented for perforations.
- Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be unperforated uPVC pipes of the type specified above, or concrete pipes complying with the requirements of SANS 677.
- ii) Geotextile : The provisions of PSDK 3.1.4 shall apply mutatis mutandis;
- iii) Aggregate : The nominal size shall be 19 mm and the aggregate shall comply with the requirements of SANS 1083 for concrete aggregate;
- iv) Filter sand : Sand obtained from approved commercial sources shall be clean, hard and durable and shall comply with the following grading requirements:
 D15 : 0,2 mm to 0,4 mm
 D85 : 1,2 mm to 4,7 mm
- PSLE 3.4 **MANHOLES, CATCHPITS AND ACCESSORIES**
- PSLE 3.4.3 **Manhole Covers, Grid Inlets, Etc.**
 Substitute the last sentence in LE 3.4.3 with the following:
 Covers and frames for manholes and grid inlets shall comply with the requirements of SANS 558 for Type 2A and Type 9D, respectively.
- PSLE 5 **CONSTRUCTION**
- PSLE 5.1 **TRENCH BOTTOM**
- PSLE 5.1.3 **Unsuitable Founding Conditions**
 Substitute "90 % of MAASHTO maximum density" in LE 5.1.3 with "90 % of MAASHTO maximum density (100 % for sand)".
- PSLE 5.2 **BEDDING AND LAYING**
- PSLE 5.2.2 **Pipe Culverts**
 Add the following to LE 5.2.2:

All pipes shall be laid on a Class C bedding, as specified in SANS 1200 LB.

Delete "Ogee type pipes need not be wrapped but shall be laid with the spigot ends pointing downstream".

PSLE 5.5 CATCHPITS, MANHOLES, INLETS, AND OUTLET STRUCTURES

PSLE 5.5.3 Plaster

Add the following to LE 5.5.3:

No plaster is required for manholes or inlets, except where otherwise shown on the drawings or ordered in writing by the Employer's Agent.

PSLE 5.5.5 Precast Manholes And PSLE 5.5.7 : Precast Inlet And Outlet Structures

Substitute LE 5.5.5 and LE 5.5.7 with the following:

Manholes and inlet and outlet structures shall be constructed in accordance with the details as shown on the drawings.

PSLE 8 MEASUREMENT AND PAYMENT

PSLE 8.2 SCHEDULED ITEMS

PSLE 8.2.4 Extra-over Items LE 8.2.1 And LE 8.2.2 For Cutting End

Units For Culverts On Site Unit : No

Add the following to LE 8.2.4:

Payment shall be made only for skew cuts greater than 20° at manholes, kerb inlets and inlet and outlet structures.

PSLE 8.2.8 Supply And Install Manholes, Catchpits, And The Like Unit : No

Substitute LE 8.2.8 with the following:

The unit of measurement shall be the number of each, in the depth increments as scheduled, fully installed in accordance with the details shown on the drawings.

The rate shall cover the cost of excavating and backfilling with approved selected material from site borrow pits, stockpile or commercial sources, compacted to 93 % of MAASHTO density (100 % for sand), supplying and installing of all material and accessories, the inlet kerbs and the channel adjacent thereto as well as for the removal and spoil of all surplus material. The rate shall also include the connection of pipes to manholes, catchpits, etc. and of building pipes into the walls of such structures, but not for the cutting of skewed ends.

PSLE 8.2.14 Supply and Install Subsurface Drains According to Drawings Unit : m

The unit of measurement shall be the length of subsurface drains installed, measured along the centre line of the completed subsurface drain.

The rate shall cover the cost of supplying, transporting, off-loading and installing all materials as well as for cutting, wasting, overlapping and installing of the materials where applicable

SANS 1200 LF : ERF CONNECTIONS (WATER)

- PSLF 1 **SCOPE**
Add the following to LF 1.1:
The water connections shall include a water meter and stop valve sealed off one metre inside the erf boundary.
- PSLF 3 **MATERIALS**
PSLF 3.1 **PIPES, FITTINGS AND COUPLINGS**
PSLF 3.1.4 **Polyethylene Pipes**
Substitute the second sentence of LF 3.1.4 with the following:
PE63 PN12.5 high density polyethylene pipes, with diameters as scheduled and shown on the drawings shall be used. PVC or nylon couplings and fittings similar to Plasson type shall be used. Only SANS approved pipes shall be accepted.
- PSLF 3.1.6 **Ferrules**
Substitute LF 3.1.6 with the following:
Ferrules shall be of the screw-in type, manufactured from bronze or gunmetal and similar to "Talbot" standard pattern, in accordance with BS 1400.
- PSLF 3.4 **BEDDING**
Substitute LF 3.4 with the following:
The bedding shall be as specified in PSLB 3.1.
- PSLF 3.5 **VALVE AND METER CHAMBERS**
PSLF 3.5.3 **Surface Boxes**
Add the following to LF 3.5.3:
Lockable cast iron combination meter/valve chambers are to be provided.

These chambers are to be of an approved manufacture and samples are to be provided to the Employer's Agent for approval prior to installation. The cast iron chambers shall be installed one meter into the erven.
- PSLF 3.6 **MARKINGS AND MARKER POSTS**
Add the following to LF 3.6:
House connections shall be marked by painting a 15 mm thick blue line on the kerb opposite the connection.

The water pipe shall be sealed effectively 1 m inside the erf boundary and the position shall be marked with a blue \pm 40 mm wooden stake, planted above the pipe end, so that it protrudes 750 mm above ground level.
- PSLF 5 **CONSTRUCTION**
PSLF 5.2 **LAYING FROM MAIN TO ERF**
PSLF 5.2.2 **Pipe Laying**
Add the following to LF 5.2.2:
Erf connection pipes shall be laid to a depth so that the top of the pipe is not less than 450 mm nor more than 600 mm below the final road surface or sidewalk level, with the provision that where construction traffic is liable to cross the connections the pipes shall have a cover of at least 450 mm.

Erf connections shall be bedded as for flexible pipes except that the selected fill blanket will not be required. The bedding thickness above and below the pipe shall be 100 mm.

Where the erf connections cross areas subject to traffic loads the trench shall be backfilled in accordance with the requirements of PSDB 3.5 and PSDB 5.7.2.

PSLF 5.2.3 **Service Connections**

PSLF 5.2.3.1 **General**

Add the following to LF 5.2.3.1:

The working pressure in the mains for determining the test pressure at which tests for erf connections shall be done, will be as specified in PSL 7.3.1.

PSLF 8 **MEASUREMENT AND PAYMENT**

PSLF 8.2 **SCHEDULED ITEMS**

PSLF 8.2.1 **Provide erf connections complete Unit : No**

Substitute LF 8.2.1 with the following:

Measurement and payment for erf connections as shown on the drawings shall differentiate between double and single erf connections, as well as between short and long connections, each for the various pipe diameters and for each diameter of water main.

Connection rates shall cover the cost of all excavations (300 mm wide) backfilling, bedding, removal of surplus material, as well as the following, complete as indicated on the drawings:

- a) a saddle, ferrule and coupling to fit the relevant diameter of water main specified;
- b) all POLYCOP piping for each type of connection required;
- c) all tees, 90° bends and reducers for each type of erf connection;
- d) the marking on the kerb as specified;
- e) the effective sealing of the connection pipe.

A separate item is provided for the supply and installation of the water meter and meter box.

An extra over item is provided, where connection lengths exceed 16m in length, for the additional length of POLYCOP piping that is required. The connection length is defined as the distance from the saddle to the water meter. The rate shall cover the cost of the necessary excavation, bedding, backfill, all material, etc. for the additional length of piping.

PSLF 8.2.4 **Supply and install water meters, meter box and couplings Unit : No**

Add the following:

“A meter box shall also be included consisting of a lockable cast iron water meter chamber complete with Optima 2000 water meter, stop tap and adaptors to eThekwini Standard Drawing No. 38585.”

SANS 1200 M : ROADS (GENERAL)

- PSM 3 **MATERIAL**
- PSM 3.2 **RESPONSIBILITY FOR LOCATION**
 Add the following to M3.2:
 The subbase and base layers of all streets shall be constructed with material from designated borrow areas. The Contractor is responsible for the selection of the material in the borrow areas. If the material in the paving layers do not comply with the minimum requirements it shall be removed and replaced with suitable material at the expense of the Contractor.
- PSM 5 **CONSTRUCTION**
 Add the following paragraph:
- PSM 5.1 **SELECTION**
 The Contractor shall deal selectively with material when existing streets are broken up in order to ensure that suitable material is not contaminated with unsuitable material. If suitable material is contaminated, the Contractor shall replace such contaminated material with suitable material, at his own expense.
- PSM 6 **TOLERANCES**
- PSM 6.3 **FREQUENCY OF CHECKS**
 Add the following to M 6.3:
 These checks shall be submitted to the Employer's Agent / PM for his approval.
- PSM 7 **TESTING**
- PSM 7.3 **ROUTINE INSPECTION AND TESTING**
 PSM 7.3.3 Substitute M 7.3.3 with the following:
 Statistical evaluation of test results shall not be applicable to this contract and all tests shall meet the specified minimum requirements for the specific material.
- PSM 8 **MEASUREMENT AND PAYMENT**
- PSM 8.1 Add the following to M 8.1:
 The cost of all routine testing done by the Employer's Agent, and of which the results do not comply with specified minimum requirements for the material, shall be borne by the Contractor.
- These costs shall be deducted from the Contractor's monthly payment certificates.

SANS 1200 ME : SUBBASE

PSME 3	MATERIALS
PSME 3.2	PHYSICAL PROPERTIES
PSME 3.2.1	Subbase material Substitute ME 3.2.1 with the following: a) The maximum aggregate size after compaction shall not exceed 63 mm.
PSME 5	CONSTRUCTION
PSME 5.4	PLACING AND COMPACTION
PSME 5.4.1	Placing Substitute "the project specification" in the second paragraph of ME 5.4.1 with "ME 6.1.4".
PSME 5.4.5	Work in restricted areas No additional payment shall be made for work in restricted areas and any relevant costs shall be deemed to be included in the tendered rates.
PSME 5.7	TRANSPORT
PSME 5.7.1	Free-haul Substitute ME 5.7.1 with the following: An unlimited free-haul distance shall apply to subbase material.
PSME 7	TESTING
PSME 7.2	PROCESS CONTROL AND ROUTINE INSPECTION AND TESTING
PSME 7.2.1	Process control Substitute "1 500 m2" with "1 200 m2" and "5 000 m2" with "3 000 m2" in Table 2 of ME 7.2.1.
PSME 7.2.2	Routine inspection and testing Substitute the second sentence of ME 7.2.2 with the following: No density shall be less than the specified minimum density for the relevant layer.
PSME 8	MEASUREMENT AND PAYMENT
PSME 8.2	COMPUTATION OF QUANTITIES Substitute ME 8.2 with the following: Measurement and payment shall be to the exact dimensions as shown on the drawings.
PSME 8.3	SCHEDULED ITEMS
PSME 8.3.11	Preparation of Road bed to a depth of 150 mm as subbase compacted to 95 % of MAASHTO density (100 % for sand) Unit : m3 The rate covers the cost of crust breaking up to a minimum depth of 150 mm, watering, shaping, building and compaction of subbase, final scraping, compliance with the tolerances and testing.

SANS 1200 MF : BASE

PSMF 3	MATERIALS
PSMF 3.3	PHYSICAL AND CHEMICAL PROPERTIES
PSMF 3.3.3	Graded crushed stone and soil fines Substitute the requirements of MF 3.3.3 with the following: Graded crushed stone (G2) shall be supplied from commercial sources.
PSMF 5.4	PLACING AND COMPACTION OF A BASE OTHER THAN A WATER BOUND MACADAM BASE
PSMF 5.4.6	Work in restricted areas No additional payment shall be made for work in restricted areas and any relevant costs shall be deemed to be included in the tendered rates.
PSMF 5.9	TRANSPORT
PSMF 5.9.1	Free-haul Substitute M 5.9.1 with the following: An unlimited free-haul distance shall apply to base-course material.
PSMF 6	TOLERANCES
PSMF 6.1	DIMENSIONS, LEVELS, ETC
PSMF 6.1.2	Grade Add the following to MF 6.1.2: In addition to the above-mentioned requirements the surface shall be of such a grade that all surface water shall drain freely to the adjacent kerbs and/or channels, and all subsequent costs to rectify the surface to comply hereto shall be borne by the Contractor.
PSMF 7	TESTING
PSMF 7.2	PROCESS CONTROL Substitute "1 500 m2" with "1 200 m2", "1 500 m3" with "1 200 m3" and "5 000 m2" with "3 000 m2" in Table 3 of MF 7.2.
PSMF 7.3	ROUTINE INSPECTION AND TESTING Substitute MF 7.3.2 with the following: No density shall be less than the specified minimum density for the relevant layer.
PSMF 8	MEASUREMENT AND PAYMENT
PSMF 8.2	COMPUTATION OF QUANTITIES Substitute MF 8.2 with the following: PSME 8.2 shall apply mutatis mutandis.

SANS 1200 MK : KERBING AND CHANNELLING**PSMK 3 MATERIALS****PSMK 3.2 PRECAST KERBING AND CHANNELLING****PSMK 3.2.3 Strength**

Substitute MK 3.2.3 with the following:

Precast kerbs, edging and channels shall be of grade 20 MPa/19 mm concrete.

PSMK 3.9 BEDDING MATERIAL

Substitute MK 3.9 with the following:

The material on which concrete kerbs, channels and edging are bedded, shall be in accordance with the dimensions shown on the drawings and shall consist of a 1:3:6 concrete mix with a 6,7 mm single size coarse aggregate.

PSMK 5 CONSTRUCTION**PSMK 5.1 EXCAVATION AND BEDDING**

Substitute "90 %" in MK 5.1 with "93 % (100 % for sand)".

PSMK 5.2 PRECAST CONCRETE KERBING AND CHANNELLING

Substitute the first sentence of MK 5.2 with the following:

Precast concrete kerbing and channelling shall be laid and bedded on a concrete bedding complying with the requirements of PSMK 3.9 and to the dimensions shown on the drawings.

PSMK 5.11 TRANSITION SECTIONS AND INLET AND OUTLET STRUCTURES

Substitute the first sentence of the second paragraph of MK 5.11 with the following:

Inlet and outlet structures shall be in accordance with the details shown on the drawings.

PSMK 8 MEASUREMENT AND PAYMENT**PSMK 8.1 BASIC PRINCIPLES**

Substitute the second sentence of MK 8.1.1 with the following:

Deductions will be made for catchpits, etc.

Add the following to MK 8.1.1:

Payment shall include the provision of expansion joints as specified.

C

SANS 1200 MM : ANCILLARY ROADWORKS

PSMM 3	MATERIALS
PSMM 3.2	ROAD SIGNS
PSMM 3.2.1	General Add the following to MM 3.2.1: All road signs and road markings shall be in accordance with the SA Road Traffic Signs Manual and as shown on the drawings.
PSMM 3.2.2	Structural steel Substitute the second paragraph of MM 3.2.2 with the following: All structural steel, including steel tubes, shall have a hot-dip (galvanised) zinc coating that complies with the requirements of SANS 763 for coatings of type A1 or B1 articles, as applicable.
PSMM 5	CONSTRUCTION
PSMM 5.2	ROAD SIGNS
PSMM 5.2.1.6	Galvanising Substitute the second paragraph of MM 5.2.1.6 with the following: Galvanised mild steel supports for road signs shall be painted in accordance with PSMM 5.2.2.4.
PSMM 5.2.2	Painting
PSMM 5.2.2.4	Painting of structural steelwork The provisions of MM 5.2.2.4 shall apply mutatis mutandis to the painting of galvanised surfaces, except for the following: a) Surface preparation Galvanised surfaces shall be thoroughly scrubbed down using an approved galvanised iron cleaning agent to remove all traces of the resin protective coating. The surface shall be washed down and scrubbed to remove all traces of grease, oil, dirt, etc; b) Priming Two coats of calcium plumbate primer shall be applied to a dry film thickness of at least 25 microns. The undercoat shall follow within one week after the priming. d) Finishing coat The colour of the finishing coat shall be dark grey, as specified in MM 3.2.8.2.
PSMM 5.3.2	Surface preparation Substitute "48 h" in MM 5.3.2 with "7 days (168 h)".
PSMM 8	MEASUREMENT AND PAYMENT
PSMM 8.3.1	Sign faces with painted background and symbols Unit : m2 Add the following to MM 8.3.1: No additional payment shall be made for the aluminium extrusions for road signs and all relevant costs shall be deemed to be covered by the tendered rates for such road signs.
PSMM 8.4	SCHEDULED ITEMS FOR ROAD MARKINGS
PSMM 8.4.1	Non-reflectorised paint applied at nominal rate Of 0,42 ℓ/m2 Unit : km or m2

Add the following to MM 8.4.1:

Markings for parking bays shall be measured and paid for as "characters and symbols".

No additional measurement and payment shall be made for "(e) Traffic island markings" and payment shall be made under the appropriate rates of payment item MM 8.4.1.

PSMM 8.4.4

Setting out and premarking Unit : km, Sum or No

Add the following to MM 8.4.4:

No additional payment shall be made for the premarking and/or dotting of lines or special markings and all relevant costs are deemed as covered by the tendered rates for MM 8.4.1.

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) Not included. To be obtained separately.
- C3.4.2 Standard Environmental Management Plan for Civil Engineering Construction Works
(24 Pages) Not included. To be obtained separately.
- C3.4.1 Part AH - OHS Act 1993 Safety Specification (2014)
Not included. To be obtained separately.
- C3.4.2 Standard Environmental Management Plan for Civil Employer's Agenting Construction Works
Not included. To be obtained separately.
- C.3.4.3 SCD - Small Contractor Development

C3.4.3 PARTICULAR SPECIFICATIONS:**C3.4.3 SCD: SMALL CONTRACTOR DEVELOPMENT****SCD.1 SCOPE**

This section covers construction aspects relating to the processes by which the construction industry develops emerging small contractors.

In terms of this contract, the Contractor shall effect such development by subcontracting portions of the Works to Targeted Enterprises (as defined in clause SCD.2(a) below) such that the combined accumulated monetary value of the work undertaken and achieved by such Targeted Enterprises equals or exceeds the monetary value of the target set by the Employer for such work.

SCD.2 DEFINITIONS AND APPLICABLE LEGISLATION**(a) Definitions**

Unless inconsistent with the context, in these specifications the following terms, words or expressions shall have the meanings hereby assigned to them:

Contract Participation

Contract Participation in terms of this contract is a process by which the Employer implements Government's objectives by setting a target relating to small contractor development which the Contractor shall achieve as a minimum.

Contract Participation Goal (CPG)

Contract Participation Goal is the monetary value of the target set by the Employer in the Contract Participation process.

Contract Participation Performance (CPP)

Contract Participation Performance is the measure of the Contractor's progress in achieving the CPG.

Project Management Team (PMT)

A team established at the commencement of the contract, comprising a representative from each of the Employer, the Employer's Agent and the Contractor that will be responsible for various functions related to the implementation of the Contract Participation process.

African

A person of South African birth who is Black as defined and is of African descent.

Black Women

A person of South African birth who is Black as defined and is of the female gender.

Black Youth

A person of South African birth who is Black as defined and is under the age of 35 years.

Disabled

A disabled person as defined in the relevant legislation.

Military Veterans

as defined in the Military Veterans Act, 2011 (No 18 of 2011).

Targeted Enterprise

A Targeted Enterprise is any company engaged by the Contractor as a subcontractor and which is registered with the Construction Industry Development Board (CIDB) in a contractor grading designation equal to 1CE or 2CE or 3CE or 4CE or 5CE or 6CE and which is also registered by the CIDB as Potentially Emerging (PE).

The CPG scope in terms of C3.4.3 of this contract has been reserved for execution using only the following prescribed minimum numbers of Targeted Enterprise subcontractors registered with the CIDB in each of the contractor grading designations indicated:

- Grade 1CE PE (minimum of 8 x Targeted Enterprise subcontractors prescribed)
- Grade 2CE PE (minimum of 5 x Targeted Enterprise subcontractors prescribed)
- Grade 3CE PE (minimum of 1 x Targeted Enterprise subcontractors prescribed)
- Grade 4CE PE (minimum of 1 x Targeted Enterprise subcontractors prescribed)

Areas other than construction may, in addition, be utilised to achieve the minimum subcontracting goals required by this tender, and these may include, amongst others, materials, training, and security.

Ownership of the Targeted Enterprise must be a minimum of 51% from the following groups - African, Black Women, Black Youth, Disabled, Military Veterans.

A minimum of one subcontractor from each Ward must be 51% owned by a Targeted Enterprise from each of the following groups - African, Black Women, Black Youth, Disabled, Military Veterans.

The Targeted Enterprise must be based in the Local Municipality (and ideally within the relevant ward) as determined by the Central Supplier Database (CSD).

The Targeted enterprise must have a valid level 1 to 3 B-BBEE certificate.

The sum of all subcontracting to subcontractors with a B-BBEE level lower than the main contractor may not exceed 25%.

Targeted Enterprises must be registered on the Central Supplier Database (CSD), tax compliant, and compliant with all other CSD verifications.

(b) Applicable Legislation

The following Acts, as amended from time to time, are predominant amongst those which apply to the construction industry and are listed here for reference purposes only:

- The Constitution of South Africa;
- Public Finance Management Act No. 1 of 1999;
- Preferential Procurement Policy Framework Act No. 5 of 2000;
- Construction Industry Development Board Act No. 38 of 2000;
- Broad-Based Black Economic Empowerment Act No. 53 of 2003.

SCD.3 CONTRACT PARTICIPATION

(a) Objective

Government's objective for this contract in terms of its broad-based black economic empowerment initiatives is to develop emerging small contractors that qualify as Targeted Enterprises as defined above.

(b) Contract Participation Targets

Contract participation is the process by which the Employer implements Government's objectives. The Employer sets a target for construction by specified entities, the rand value of which is based on the services and work undertaken by the specified entities. The target rand value will be measured as that specified target percentage of the Contractor's final certified value of work completed (excluding CPA and VAT) measured at the date of issue of the Certificate of Completion. The Contractor is obliged to commit to or exceed the target stated in section C1.2.2 Contract Data, Part A: Data Provided by the Employer.

(c) Contract Participation Goal (CPG)

The CPG is the monetary value of the target set by the Employer and will be calculated as follows:

$$\text{CPG} = \text{final contract value (excluding CPA and VAT)} \times (\text{target \% set by the Employer for Targeted Enterprises})$$

The final contract value is the total value of certified work measured at the date of issue of the Certificate of Completion.

The value of the Provisional Sums scheduled under item SCD10.02 of C3.4.3 of the schedule of quantities shall not necessarily make up the full value of the works required to meet the CPG target set by the Employer. It is the Contractor's responsibility to assess the work required to meet the CPG target and, if necessary, to engage Targeted Enterprises to execute work on the main contract as well to ensure that the CPG target is achieved.

(d) Contract Participation Performance (CPP)

The CPP is the monetary value of the Contractor's actual progress towards achievement of the CPG calculated as follows:

$$\text{CPP} = \text{total value (excluding CPA and VAT) of contribution by Targeted Enterprises}$$

The Contractor's Contract Participation Performance will be measured monthly in order to monitor the extent to which he is striving to reach the CPG. The basis of monitoring shall be the levels of the individual contributions for Targeted Enterprises. Monthly returns, in a format approved by the Employer, are required

from the Contractor and shall be submitted with each interim payment certificate. Failure to adhere to this requirement shall result in the delay of any payment due until the Employer's Agent confirms that the information has been received.

To assist in the measurement of CPP, the Contractor shall include in his contract programme details of how he will achieve the CPG. This shall include CPG achievement details for both the specific work indicated for CPG in terms of this contract for completion by Targeted Enterprises as well as details for any other work that the Contractor may use towards achieving the CPG. The detail shall be provided not later than one month after the Employer's Agent has accepted the original construction programme and shall be updated

with every subsequent revision of the programme.

In the event that the Contractor fails to substantiate that any failure to achieve the Contract Participation Goal (CPG) is due to quantitative under runs, the elimination of items contracted to Targeted Enterprises, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable for a penalty as prescribed in clause SCC 4.1.1 of section C1.2.1.2 Special Conditions of Contract. The penalty shall be calculated as follows:

$$\begin{aligned} \text{Penalty} &= 5\% \text{ of the monetary value by which the achieved monetary value (CPP)} \\ &\quad \text{falls short of the target monetary value (CPG)} \\ &= 5\% \text{ of (CPG - CPP)} \end{aligned}$$

The penalty shall be applied on a pro rata basis according to a monthly evaluation of achievements against the programmed utilisation.

(e) Accredited Registration

CPP for Targeted Enterprises shall only be accepted if the respective Targeted Enterprises for which services or work is being claimed as having been performed are registered with the CIDB in one of the defined categories. In addition, documentary evidence that such Targeted Enterprises are registered with the South African Revenue Services (SARS) shall be lodged with the Employer's Agent before the work or service may be considered as having been performed by a Targeted Enterprise. The responsibility for producing evidence of such registration documentation shall rest with the Contractor.

(f) Record keeping and Portfolio of Evidence

The Contractor shall assume responsibility for the compilation and maintenance of comprehensive records detailing each Targeted Enterprise's progress during construction, starting from the award of a subcontract to a Targeted Enterprise until the successful completion of the subcontract work or termination of the subcontract.

The Contractor shall keep comprehensive records of the training given to each trainee and, at the successful completion of each training course, each trainee shall be issued with a certificate indicating the course content as proof of attendance and completion. The Contractor shall keep a register of certificates issued. Whenever required, the Contractor shall provide copies of such records to the Employer's Agent.

The Contractor is also required to develop and/or maintain a portfolio of evidence for each Targeted Enterprise as described in clause SCD9.7 below.

SCD.4 TENDER PROCESS FOR TARGETED ENTERPRISE SUBCONTRACTOR PROCUREMENT

The Contractor shall refer to the schedule of quantities contained in these Particular Specifications and to any other construction activities required to execute the Works in terms of this contract to determine how he

intends to unbundle or package specific subcontracts for Targeted Enterprises and shall present his proposal to the PMT for approval.

The Contractor shall be responsible for compiling the tender documents that will enable him to engage the Targeted Enterprises.

In compiling the subcontract tender documents, the Contractor shall also include in each tender document any Tender Rules that may be relevant and shall also include the proposed subcontract agreement. The Contractor shall compile each subcontract tender document in such a manner that it shall facilitate the achievement of all objectives and principles pertaining to the development of the Targeted Enterprises.

Draft tender documents shall be approved by the PMT before the Contractor invites tenders from Targeted Enterprises, who will be invited in consultation with the PMT and the local PLC.

The PMT shall conduct a compulsory briefing session to explain the Works required and the tender process to the Targeted Enterprises.

Tenders for the subcontracted works must close at a stipulated time and date. Tenders shall be placed in a suitable formal Tender Box of design approved by the PMT, located at the Contractor's site office. The tender opening shall be conducted by the PMT.

The Contractor shall evaluate the tenders and shall submit the tender adjudication report for each subcontract to the PMT for review prior to award of each subcontract.

It shall be a condition of tender that the subcontractors appointed as Targeted Enterprises are registered with the Construction Industry Development Board (CIDB) in a contractor grading designation equal to 1CE or 2CE or 3CE or 4CE or 5CE or 6CE and are also registered by the CIDB as Potentially Emerging (PE).

It shall also be a condition of tender that Targeted Enterprises shall include in their tender submission the following documentation:

1. Valid letter of good standing from the Department of Labour.
2. A tax compliance status report.
3. A BEE verification certificate
4. Bank account details certified by the bank.
5. Certificate of registration of the tenderer in the required CIDB contractor grading designation, confirming the tenderer's registration Status as "Active" at the closing date of tender.

The tender documents shall also contain the proposed subcontract agreement in accordance with clause SCD7.1.

SCD.5 PROJECT MANAGEMENT TEAM (PMT)

(a) Appointment

A Project Management Team (PMT) is to be set up comprising a representative from each of the Employer, the Employer's Agent and the Contractor

(b) Duties and functions of the PMT

The duties and functions of the PMT are as follows:

- (i) determine the scope and extent of the works to be included in any particular subcontract;

- (ii) determine the target tender price according to the scope of work, and adjust the target rates where relevant;
- (iii) monitor the management of the tender process for the subcontracts to be executed by the Targeted Enterprises;
- (iv) adjudicate and approve tenders for Targeted Enterprise subcontracts;
- (v) monitor the management of the subcontracts involving Targeted Enterprises;
- (vi) monitor the training, mentoring and development of Targeted Enterprises.

SCD.6 GENERAL RESPONSIBILITIES OF THE CONTRACTOR TOWARDS TARGETED ENTERPRISE SUBCONTRACTORS

(a) Obligations

The Contractor shall ensure that he complies with the following obligations:

- (i) institute a quality assurance system;
- (ii) provide adequate training, coaching, guidance, mentoring and assistance to Targeted Enterprises;
- (iii) provide financial support and other assistance to ensure that the Targeted Enterprises are able to meet their obligations and commitments with respect to their subcontracts, including acquisition of labour, equipment and materials; and
- (iv) ensure that the contract participation goals and objectives are achieved.

SCD.7 MANAGEMENT OF TARGETED ENTERPRISE SUBCONTRACTS

The Contractor shall conclude the subcontract agreements and provide the necessary management support to the Targeted Enterprise subcontractors. Failure by a Targeted Enterprise subcontractor to comply with the terms and conditions of the subcontract agreement shall result in penalties being applied or the subcontract terminated.

SCD.7.1 Compilation of Subcontract conclusion agreement

- (a) The Contractor in liaison with the PMT shall be responsible for the conclusion of each subcontract agreement. The agreement shall be in accordance with the provisions of subclause 4.4 of the General Conditions of Contract for Construction Works 3rd Edition 2015 and shall be consistent with the terms and conditions in this contract. The agreement shall be subject to approval by the Project Management Team.

The terms and conditions of the subcontract agreement shall also specify the following:

- (i) an entitlement of the Targeted Enterprise subcontractor to receive such training as is contemplated in this contract;
- (ii) an obligation on the Targeted Enterprise subcontractor to participate and co-operate in such training as is provided for in this contract;
- (iii) the allowable sources from which workers may be drawn in terms of the contract;
- (iv) the terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract;
- (v) the training to be provided to the workers; and
- (vi) the terms and conditions relating to payment of the Targeted Enterprise subcontractor.

Such terms and conditions shall also include a clause stipulating that payment to a Targeted Enterprise subcontractor for work done shall be made within 30 days of the submission of the invoice by the Targeted Enterprise subcontractor to the Contractor. In the event of failure by the Contractor to make the payment by the due date, he shall pay to the Targeted Enterprise subcontractor interest, at the prime overdraft rate charged by the Targeted Enterprise subcontractor's bank, compounded monthly, on all overdue payments from the

date on which the same should have been paid to the date when payment is effected, without prejudice to the Targeted Enterprise subcontractor's other rights under the contract or by law.

SCD.7.2 Quality of work and performance of the subcontractor

- (a) The Contractor shall closely monitor and supervise all Targeted Enterprises and shall train, mentor, guide and assist each Targeted Enterprise in all aspects of management, execution and completion of his subcontract. This shall typically include assistance with planning of the works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures. The extent and level of such training, mentoring, guidance and assistance to be provided by the Contractor shall be commensurate with the basic level of subcontract applicable and shall be directed at enabling the Targeted Enterprise to achieve the successful execution and completion of their subcontract.
- (b) The Contractor shall closely monitor and supervise all Targeted Enterprises and shall give reasonable warning to the Targeted Enterprise when any contravention of the terms and conditions of the subcontract has occurred or appears likely to occur. The Contractor shall, whenever feasible, give the Targeted Enterprise reasonable opportunity to make good any such contravention, or to avoid such contravention, and shall render all reasonable assistance to the Targeted Enterprise in this regard.

SCD.7.3 Dispute avoidance and resolution procedures

- (a) When taking any disciplinary action or imposing a penalty as provided for in the subcontract, the Contractor shall explain fully to the Targeted Enterprise that such actions are provided for in the subcontract. If such action is contemplated this shall be discussed with the PMT before any action is taken.
- (b) If the subcontractor, in the opinion of the Employer's Agent, fails to comply with any of the criteria listed below, the Employer's Agent shall issue a written warning to the Contractor, stating all the areas of noncompliance. A copy of the letter of warning shall be forwarded to the Employer. The criteria are as follows:
 - (i) acceptable standard of work as set out in the specifications;
 - (ii) progress in accordance with the time constraints in the subcontractor's tender document;
 - (iii) punctual and full payment of the workforce and suppliers;
 - (iv) site safety; and
 - (v) accommodation of traffic.

The subcontractor shall have 21 days from the date of receipt of the letter of warning by the Contractor to address and rectify the issues raised by the Employer's Agent, with the exception of the above subclauses (b)(iv) and (v) for which the reaction time shall be in accordance with the relevant specifications for those aspects of the Works but shall not be longer than 24 hours. Failure by the subcontractor to comply with deadline set, will be sufficient grounds for the Contractor to apply a penalty, or terminate the subcontract provided that the PMT is satisfied that the Contractor has made every effort to correct the performance of the subcontractor.

- (c) The Targeted Enterprise shall have the right to dispute any ruling given or deemed to have been given by the Contractor, Employer's Agent or Employer. Provided that, unless the Targeted Enterprise shall, within 21 days after his receipt of a ruling or after a ruling shall have been deemed to be have been given, give written notice (hereinafter referred to as a Dispute Notice) to the Contractor, referring to this clause,

disputing the validity or correctness of the whole or a specified part of the ruling, he shall have no further right to dispute that ruling or the part thereof not disputed in the said notice.

SCD.8 SPECIFIC WORK TO BE CARRIED OUT BY TARGETED ENTERPRISE SUBCONTRACTORS

For this particular contract, the following listed work has been identified in terms of this Particular Specification, C3.4.3, as suitable for execution by Targeted Enterprises in order to assist the Contractor in achieving his CPG:

1. Pipe laying
2. Brick manhole construction
3. Valve chamber construction
4. Brick headwall construction
5. Installation of reno mattresses, gabions and retaining walls.
6. Laying of concrete kerbs, channels and v drains
7. Landscaping
8. Erection of fencing, guard rails and hand rails
9. Road marking and erection of sign boards
10. Construction of sub soil drains incorporating restricted hand excavation
11. Other work identified by the Employer to be executed in this contract.

The work to be carried out by Targeted Enterprises is not limited to the work listed above, and the Contractor may need to engage Targeted Enterprises on other aspects of the main contract work in order to achieve his CPG.

SCD.9 TRAINING, COACHING, GUIDANCE AND MENTORING

SCD.9.1 Obligations

This section provides details of the Contractor's obligations of implementing the National Skills Development Strategy. This strategy sets priorities for the skills development of workers. The Sector Education and Training Authorities (SETA) and provincial offices of the Department of Labour will play key roles in transforming the vision of the strategy into reality.

Supervision is included as part of the contractor's general obligations for the administration and management of the Targeted Enterprises. However training, coaching, guidance and mentoring are not included as part of the Contractor's general obligations unless specific provision to that effect has been made in the project specifications.

The Contractor shall, from the commencement of the contract, provide a structured development programme designed to improve the entrepreneurial and basic business management skills of identified Targeted Enterprises and hired labour that show initiative, as well as to improve their specific task skills (construction skills) commensurate with the applicable levels of subcontract that will enable the Targeted Enterprises to achieve the successful execution and completion of their subcontracts. The ultimate objective of training, coaching, guidance and mentoring is to develop the Targeted Enterprise subcontractors as far as their potential allows.

SCD.9.2 Definitions

(a) Training

Training refers to the process of teaching a learner – usually in a classroom or simulated work environment situation. Training usually takes place with one teacher/trainer and several learners. Principles and theory are taught. Demonstrations are given. Assignments are then set to ensure that the learner is able to apply what has been taught. Training is done by a

specialist in the subject, who is also qualified to train.

Example: Use of a dumpy level

Training would involve the theory of how a dumpy level works and how to calculate levels. A demonstration of how to set up and read a level could be given.

(b) Coaching:

Coaching refers to hands-on training and is mostly on a one-on-one basis of tangible and measurable skills. It is typically on-site training, or learning-on-the-job. Coaching is training by the process of “watch-docorrect- practice”. The coach does the task while the learner watches and asks questions. Then the learner does the same task while the coach watches. The learner is corrected until the coach feels that he has the gained competence in the function. The learner is then left to practise the task or skill, which the coach oversees. Coaching is imparting a skill – usually manual or physical. A coach is usually a person doing the same type of work on a higher or more competent level, or a person who has a mastery of the skill/task. While training gives the theory or shows/explains the principles, coaching helps the learner become competent and master a skill. A coach is often in the direct reporting line, i.e. someone in authority. Coaching could be part of the management function and would make the job run more smoothly.

Example: Use of a dumpy level

Coaching would involve taking the learner onto site, setting up a dumpy level, reading levels. Then the coach would get the learner to do the job, while the coach checked the setting up and reading. Once the learner understands and can do the tasks, the coach checks periodically to ensure the learner is still doing the job properly.

The desired outcome of coaching is for the learner to “fit-the-mould”, and to do things the same way and to the same standard as the coach.

(c) Guidance:

Guidance is anticipating where one might go wrong, or where one is doing a task in a complicated, inefficient or ineffective way, and giving advice as to how to achieve a better result. Guidance is mostly given by a person in the direct reporting line, but can be given by anyone. Guidance is not imparting skills, but suggesting ways to improve performance.

Example: Use of a dumpy level

A person who knows how to use a dumpy level would be given guidance as to where he would next set up the level to limit the number of set-ups. Guidance could be an extension of coaching.

(d) Mentoring:

Mentoring is developing a person on a long-term career path. It is mostly about imparting skills that are often intangible and non-measurable. A mentor is seldom anyone in the direct reporting line – although he could be a person several levels higher in that reporting line. Mentoring is more about developing a relationship and taking a personal interest in an individual. A mentor looks out for that individual and gives him advice that cannot be found in a book or in the normal course of business. The sort of issues a mentor discusses with the protégé include company politics, how to pick up work before others get wind of it, how to

position one's company to get a better competitive advantage, how to tender such that the tender is lowest but the profit is as good as or better than the next person, how to determine and assess risk. Mentoring helps the protégé think strategically, sharpen entrepreneurial skills and grow – both personally and in terms of the company. A mentor helps the protégé to develop insight and shrewdness. It is more about business skills to survive long-term than the technical, tactical or day-to-day activities of doing business.

The desired outcome of mentoring is for the protégé to develop his own style, i.e., to shape his own "mould".

(e) Supervision

Supervision is instruction regarding the work to be performed, and ensuring it is carried out to specification and to the satisfaction of the supervisor. It is not instruction on how the work is to be performed, but rather on what work has to be performed, and usually has specific time frames.

SCD.9.3 Assessment of Targeted Enterprise potential

It is the responsibility of the Contractor to determine the level of development required by each Targeted Enterprise. This will require that the Contractor determine the level at which the Targeted Enterprise can operate competently and determine the skills already acquired by the Targeted Enterprise subcontractor in terms of training and on-the-job experience. In some circumstances Adult Basic Education Training (ABET) will need to be started before any formal training can commence. The assessment of each appointed Targeted Enterprise is to be produced by the Contractor for discussion at the first Project Management Team meeting following the appointment of the Targeted Enterprise.

SCD.9.4 Development Plan

Within a month of the first PMT meeting on the Targeted Enterprise assessments, the Contractor is to present a development plan, specific to each Targeted Enterprise. The development plan is to be reviewed by the PMT for appropriateness before being implemented.

The development plan is to include the following:

- (i) specify the development needs of each Targeted Enterprise contracting entity – the systems the entity lacks;
- (ii) specify the development needs of the individuals comprising the entity – the skills the individuals within the entity lack;
- (iii) the level to which that activity will be developed within the period of the contract;
- (iv) whether training, coaching, guidance and/or mentoring is to be given in each activity;
- (v) the person/s responsible for each activity.

SCD.9.5 Identification and general training of potential Targeted Enterprises

- (a) The progression of training, coaching and mentorship may need to start with the identification and general training of potential Targeted Enterprises and hired labour that show initiative, and should end with their acquisition of sufficient management skills that will equip them to compete confidently for subcontract work beyond the duration of this contract. In addition, generic skills shall be taught where the need for these has been identified as being necessary amongst Targeted Enterprise workforces and hired labour.
- (b) Before commencing with any structured training the Contractor shall submit his intended programme to the Project Management Team for approval of its subject

content and proposed trainers, and the Contractor shall, if so instructed by the PMT, alter or amend the programme and/or course content.

The Contractor shall be responsible for the provision of everything necessary for the delivery of the various training workshops and modules including:

- (i) Provision of a suitable fully serviced training venue facility;
- (ii) Procurement of suitable accredited trainers;
- (iii) Provision, in conjunction with the accredited trainers, of all the necessary training materials, including stationery and study materials; and
- (iv) transportation of the learners to and from the training venue facility (it is therefore in the Contractor's interest that the training venue facility be provided on the site in order to reduce these transportation costs).

In order to avoid duplication of training programmes and training facilities, all structured training, including the training described in this C3.4.3: Small Contractor Development, shall be measured and paid for in terms of the pay items provided for training in SCD.

SCD.9.6 Activities

The tasks for each of the activities making up the development plan are described below in further detail.

SCD.9.6.1 Technical

SCD.9.6.1 (a) Technical Administrative Functions

General Tasks

- (i) Understanding and interpreting drawings:

On Roadwork Construction Contracts, the reading of drawings is required at high levels of Targeted Enterprise development. The relevant drawings that would need to be understood include all relevant roadwork and concrete brick wall details for construction. Understanding and interpreting drawings includes the following:

 - Understanding the cross referencing to drawings from the contract documents and the bill of quantities;
 - Understanding the layout of the drawings;
 - Understanding the plan view and elevations and cross sections;
 - How to interpret, accurately lay out and construct the details.
- (ii) Setting out construction works:

This skill requires an understanding of the function and use of instruments such as the dumpy level, the theodolite, and procedures such as stringing a line.
- (iii) Technical know-how of all relevant Roadwork construction activities, and typically includes:
 - Traffic control/safety precautions;
 - Environmental management;
 - Clearing and grubbing;
 - Excavations and backfilling;
 - Pre-cast and in-situ cast concrete works (including reinforcing where applicable);
 - Storm water channelling and catch pits / chutes;
 - Mass earthworks and pavement layers;
 - Asphalt paving;
 - Concrete block paving;
 - Concrete brick laying;
 - Finishing up and tidying of works.

The development plans shall maximise the exposure of each Targeted Enterprise to as many activities as is practicable.

- (iv) Task organization:
This activity involves the correct supervision of labour and organisation of tasks to ensure that labour is utilised most effectively. This includes the following:
 - (i) Allocation of the appropriate number of people for the task;
 - (ii) Availability on site of the correct type and amount of material and equipment at the point of use;
 - (iii) Planning tasks ahead so that labour does not stand around waiting.
- (v) Task prioritization:
Task prioritization must cover an understanding of critical paths, including identifying which tasks can be postponed and which are urgent. It includes planning and monitoring so that time targets are achieved. It must also cover gaining an understanding of the penalties applicable to late completion of tasks.
- (vi) Work schedule:
This is the ability to produce daily work plans and will assist with task organization. Daily work plans need to be developed into weekly and monthly work plans and vice versa. These plans assist in material ordering, plant scheduling, labour allocation, timeous completion of the work, and keeping track of profits/losses.
- (vii) Effectiveness:
Effectiveness is ensuring that a job gets done right, or properly.
Effectiveness is doing the right things.
- (viii) Efficiency:
Efficiency is ensuring that the job is done with the least effort and cost possible.
Efficiency is doing things right.
- (ix) Quality control:
Quality control requires knowledge of specifications and tolerances and ensuring that the work adheres to these, as well as understanding the requirements of the Employer.
- (x) Measuring work done for payment certificates:
This is the ability to measure actual work done and to translate these measurements into a payment certificate. Knowledge must be gained of how to calculate escalation, how to claim for VOs and how to handle other claims.
- (xi) Site meetings:
Knowledge needs to be gained of the following:
 - (i) The importance of site meetings;
 - (ii) Identifying the relevant personnel to attend site meetings;
 - (iii) Preparing for a site meeting;
 - (iv) Understanding progress reports including why they are important and how to Prepare them;
 - (v) Recording issues discussed at the meeting;
 - (vi) Implementing and follow through of issues recorded;
 - (vii) Understanding the process of the meeting and when to bring up various concerns is needed.
- (xii) Handling site instructions and VOs:
This is the ability to distinguish between site instructions and variation orders and how to respond to such instructions.

Materials Tasks

- (xiii) Materials planning:
This includes the following:
Determining the quantity of materials required for each task and planning ordering;

Determine appropriate lead times to ensure that everything required to do a job is on hand;

Quantity take-offs for pricing a bill at higher levels of development.

(xiv) Receiving, storing and handling materials:

Receiving includes checking materials delivered against the delivery note and the order placed. Storage involves knowing what quantities and type of materials to store, planning accessibility, and safety of materials from theft, the weather, etc. Handling of materials needs to be carried out to ensure no wastage or damage.

(xv) Waste control:

This includes the importance of waste control to reduce costs and the management of reducing waste of materials in storage and in use.

(xvi) The handling/installation of precast units:

Knowledge of precast units, handling and installation must be gained.

Equipment Tasks

(xvii) Machine Analysis:

This is the analysis of the use of equipment. It includes calculating fuel and hourly costs. This will enhance an understanding of the effective use of equipment, how to reduce costs and provide a background for pricing of equipment for tenders.

(xviii) Maintenance Schedule:

This covers the importance of maintenance of equipment and how to schedule this so that there is minimal disruption in day-to-day work.

(xix) Appropriate and correct use of tools and equipment: Provide coaching on the correct use of tools and equipment.

(xx) Care of tools and equipment:

Care of tools and equipment includes the proper handling, cleaning, storage, stacking, etc.

The coaches of the above listed activities are generally the Foreman, Site Clerk, Mechanic, Construction Manager, Plant Manager or Contracts Manager.

SCD.9.6.1 (b) Technical Management Functions

General Tasks

(i) Site set-up:

This involves gaining an understanding of site set-up procedures and principles, including establishing a site office and facilities, providing access to the site, initial layout of the works, storage facilities, security, etc.

(ii) Construction program / work plan:

Knowledge of how to develop a construction program / work plan, monitor and assess the production, and correct the programme where necessary.

(iii) Understanding tests:

Understanding what tests are required, reading and interpreting results relating to specifications and quality, and how to make the corrections required.

(iv) Productivity:

Recording productivity and understanding the principles. Knowing where to make corrections and how to implement solutions.

Material Tasks

(v) Materials schedule:

This involves gaining knowledge of how to develop a materials schedule from a Bill of Quantities, the Drawings and any other relevant contractual document. It also includes linking the works program to an ordering schedule, and sourcing of suitable materials.

Equipment

- (vi) Determine appropriate levels of equipment:
The determination of the appropriate type and number of tools, and equipment required.
- (vii) Proper use of equipment:
This is gaining knowledge, understanding and competency in the proper use of equipment.
- (viii) Productivity of equipment:
The productivity of equipment must be understood to know how this affects his ability to perform.
- (ix) Allocation of equipment:
This involves the ability to competently allocate equipment to the various tasks.
- (x) Waste control:
Waste control is an essential aspect of running a site well and making a profit. The principles of this, together with the practical ways to control waste need to be understood. The coach/mentor of these activities is generally the Construction Manager, Contracts Manager, or Equipment Supplier

SCD.9.6.2**SCD.9.6.2 (a)****Financial****Financial Administrative Functions**

- (i) Basic Finance:
This includes knowledge of the definition and difference between debtors and creditors as well as gaining competency in basic bookkeeping. Knowledge of keeping and managing accounts and other financial documents also needs to be developed. A basic financial course may be appropriate to develop in this area.
- (ii) Bank account:
The opening of a bank account, making deposits, the difference between stop-orders and debitorders, overdraft facilities and generally managing a bank account needs to be understood. This can also be done through a course, and/or with a supportive bank manager, and/or with the appointed coach/mentor.
- (iii) Orders and systems:
This will require the setting up of systems and procedures that will take into consideration delivery lead-times, non-availability of items, alternate sources, preparation of storage areas ready for delivery, and the area/volume of storage space.
- (iv) Invoices:
The development of systems within the Targeted Enterprise entity that will check materials received versus what was ordered, check quantities delivered, and check actual prices paid against quotes/tender prices.
- (v) Stock Control:
The importance of controlling stock needs to be understood. Systems to implement stock control need to be imparted.
- (vi) Payroll:
This involves the establishment of a payroll system within the Targeted Enterprise entity. This could include developing an internal system, outsourcing the payroll or learning a commercially acquired payroll system. The system needs to record days worked, pay rate, legal deductions and a leave register.
- (vii) Legal requirements:

The financial requirements of legal obligations of companies must be imparted to the Targeted Enterprise subcontractor. This includes payment of company tax, VAT (Value Added Tax), Skills Development Levy (SDL), Work Unemployment Insurance Fund (UIF), Workman's' Compensation (WC), and any applicable municipal levies as well as the applicable minimum wages for the area (also refer below to SCD9.6.5 Legislative).

(viii) Payment certificates:

This includes the compilation and submission of a payment certificate. As well as knowing how to determine work done to date, how to present it in terms of the Bill of Quantities, and how to claim for materials on site.

SCD.9.6.2 (b) Financial Management Functions

(i) Claims and VOs:

The following types of claims may be applicable: Claims for additional work done, inclement weather, etc., claims for Variation Orders implemented. Understanding claims includes knowing when a claim can be submitted, the procedure and paperwork for the submission of a claim and which claims are worth pursuing.

(ii) Cash Flow:

The concept of cash flow, as well as the development of cash flow projections and the monitoring of the cash flow are vital aspects of running a business. Included under this topic is knowing how long it takes from placing an order for material until payment is due, and time lags between ordering materials and using the materials and receiving payment for work done. The concept of sufficient working capital also needs to be imparted.

(iii) Costing System:

Costing systems must be set up and understood. Aspects include capturing costs, monitoring profit, analysing costs and using this information to determine productivity levels.

(iv) Tendering:

A knowledge is required of how to build up rates, how to obtain prices, how to negotiate better discounts, how to be creative to achieve the desired result more cost effectively, how to calculate and accommodate P&Gs, and what Provisional Sums are and how they are handled.

(v) Budgeting:

The difference between tendering and budgeting must be understood as well as gaining skills on how to develop a budget. Knowledge of how to monitor actual expenses against budgeted expenses, how to analyse the differences, and the value budgeting is needed.

(vi) Risk assessment:

This involves learning how to assess the financial risks associated with the job in terms of his performance and profitability and the management of these risks. This becomes increasingly important as the Targeted Enterprise grows.

(vii) Insurance:

This includes an understanding of why insurance is required, how to obtain insurance, the benefits and costs, insurance providers and what can be claimed from different types of insurance. The different types of insurance to be included are Short term insurance, Public Liability and Contractors All Risk insurance.

(viii) Interest Rates:

Interest Rates can have a dramatic impact on the profit margins. Therefore an understanding must be gained of what interest rates are, how they impact on

- profit margins, how to cater for fluctuating interest rates in preparing a tender, and how to find and/or negotiate the best interest rates.
- (ix) **Bridging Finance:**
This includes understanding what bridging finance is and the different forms of bridging finance. Guidance should be given on when bridging finance should be used, where it can be obtained, what securities are needed, and how to go about securing funds.
- (x) **Sureties:**
This involves understanding what Sureties are, why and when they are needed, how they can be obtained, what they cost and how they can be redeemed.
- (xi) **Procurement of Plant and Equipment:**
The difference between purchasing, leasing, hire purchase and hiring plant needs to be understood. Also included is gaining knowledge of all aspects of these options as well as the benefits and implications for the business for each option.
- (xii) **Procurement:**
Procurement of materials includes sourcing suppliers, getting quotes, placing an order and negotiating discounts. The managing contractor can assist in introducing higher level Targeted Enterprises to the relevant materials suppliers.
- (xiii) **Subcontract:**
At the lower levels, this will involve the Targeted Enterprise understanding the subcontract agreement between himself and the managing contractor and the obligations of this document. With a Targeted Enterprise operating at a higher level, this will include sourcing other subcontractors, as well as interpreting the tender/quote, adjudication and awarding of subcontracts.
- (xiv) **Productivity:**
This includes taking production rates and translating them into financial terms to help build up rates for tendering and to monitor profit margins. The coach and/or mentor for these functions are typically the Bookkeeper, Site Clerk, Foreman, Construction Manager, Contracts Manager, Accountant, Estimator and Buyer.

SCD.9.6.3**Human Resources****SCD.9.6.3 (a)****Human Resource Administrative Functions**

- (i) **Labour Supervision:**
This involves the supervising of labour effectively. This includes knowing the level of competencies of labour, being able to motivate workers to ensure that productivity levels are achieved and maintained. It also includes the allocation of tasks to labour.
- (ii) **Team Sizes:**
This is ensuring the size of the work team is appropriate for the matching activity and understanding that teams that are too large are unproductive and teams that are too small are not effective.
- (iii) **Productivity:**
The principles of productivity and how it is best achieved for various tasks is to be understood and applied. It also involves being able to determine realistic productivity levels, such as square metres of grass cut with a machine per hour, length of guardrail installed per day, etc.
- (iv) **Time sheet:**
A system of time sheets which accurately records the time each employee spends on the job needs to be in place.
- (v) **Leave Registers:**

A system for recording leave needs to be in place, which includes the dates that leave was taken, what type of leave it was and whether the employee qualifies for paid or unpaid leave in terms of legislation.

- (vi) Employee records:
This involves knowing and complying with legislation for conditions of employment. Employment contracts must be in place for all labour employed and a formal system of keeping employee records must be established. Employee records must be in line with legislation including recording of employee details and copies of identification documents, termination of service procedures, certificates of service etc.
- (vii) Disciplinary procedure:
Knowledge of the legal aspects of Disciplinary procedures is essential. The ability to set up these procedures and ensure that all staff understand and adhere to them is required. Warning systems must include records of verbal warnings, warning forms, disciplinary hearings, dispute resolutions and termination procedures.
- (viii) Training:
This involves understanding the concept of the Skills Development Levy, and how to claim from CETA for training provided. Service Providers have CETA funded Skills Facilitators available to assist Targeted Enterprises in identifying training needs and compiling work place skills plans (W P) at no cost to the Targeted Enterprise. An understanding of the importance of providing training for staff with regards to AIDS awareness, Safety, Productivity, Development and Accountability is essential
- (ix) Community Liaison:
The management and importance of Community Liaison must be understood.

SCD.9.6.3 (b) Human Resource Management Functions

- (i) Labour recruitment:
Employment of labour with the appropriate skills is essential. Therefore, sourcing of appropriate labour and knowledge of how to assess the range of skills and level of competency in potential employees needs to be gained.
- (ii) Labour allocation:
Allocation of labour is a skill that needs continual refining. It requires knowing the specific strengths of staff employed, the numbers of labourers and level of skill required for specific tasks, as well as being able to build effective cohesive teams that understand their roles without continual supervision.
- (iii) Labour schedules / planning:
This involves learning how to compile labour schedules from the works program and the consequent allocation of staff to the work planned.
- (iv) Histogram / manpower plan:
A manpower plan includes establishing how many people are needed on the job at what times. This is an important skill even at the most elementary level. As the Targeted Enterprise develops, the management of moving people from site to site in such a way that there are neither too many nor too few labourers and/or supervision becomes an important skill to obtain.
- (v) Management of supervision:
This activity involves understanding the principles of supervision, and how to effectively manage to ensure that these principles are applied and/or developed by the appointed supervisor.
- (vi) Productivity:

Productivity applies to labour as well as tasks and plant. Skills must be developed on how to determine appropriate levels of labour productivity and how to ensure that staff achieves these levels.

(vii) Labour Law:

A basic understanding of labour legislation, specifically Labour Relations Act (LRA), and Basic Conditions of Employment Act (BCEA), Employment Contracts, and Termination of Service is essential as well as an understanding of the implications of these laws on business.

(viii) Accountability systems:

This requires that accountability systems are developed and implemented for supervisory staff. Coaching, guidance and mentoring on the above listed functions are typically undertaken by the Foreman, Construction Manager, Site Clerk, HR Manager, Trainer and Contracts Manager.

SCD.9.6.4

Contractual

SCD.9.6.4 (a)

Contractual Administrative Functions

(i) Relationships and communication:

This involves the development and maintenance of good relationships and the establishment of good communication systems within the Targeted Enterprise business. This includes communication between the Targeted Enterprise and the other role players such as the Managing contractor, the Employer's Agent and the Employer. An understanding of the importance of good communication is also important. Good communication starts with the right attitude, and involves listening as well as talking. It is also listening to what is not being said. Allowances need to be made for differences in culture and economic backgrounds

(ii) Setting up contractual administration requirement (systems):

Contractual administration systems need to be established and implemented. This includes the use and importance of site dairies and keeping rainfall/weather records, as well as developing progress reports.

(iii) Implementing EMP:

This activity involves understanding the design and implementation of an Environmental Management Plan.

SCD.9.6.4 (b)

Contractual Management Functions

(i) Contract Law:

Knowing and understanding the content and implications (including costs) of the Conditions of Contract and the Specifications that will be required. This will include understanding the content and implications of penalty clauses.

(ii) Risk Assessment:

This activity involves being able to assess the contractual risks associated with the contract both in terms of performance and in terms of the risks associated with the Employer.

(iii) Managing Contract Administration:

Managing Contract Administration ensures that all the required reports, such as accident reports and progress reports are completed and submitted.

(iv) Administration of subcontractors:

Identification and separation of the responsibilities of the managing contractor from the responsibilities of the subcontractors needs to be understood and applied. The management of subcontractors to ensure that contractual obligations are met is essential knowledge to be gained by higher level

Targeted Enterprises.

- (v) Subcontractor agreements:
Understanding the contents of the subcontract agreement between the Targeted Enterprise and the contractor is an important skill to be learnt.
- (vi) Disputes:
This activity involves understanding the procedures used in handling disputes or disagreements with the Contractor and/or the Employer. The Contracts Manager and Construction Manager would normally be involved in this function.

SCD.9.6.5

Legislative

SCD.9.6.5 (a)

Legislative Administrative Functions

- (i) Legal Registrations:
The legal requirements for registration of companies must be imparted to the Targeted Enterprise subcontractor. This includes company tax, VAT (Value Added Tax), PAYE, Skills Development Levy (SDL), Unemployment Insurance Fund (UIF), Workman's' Compensation (WC), and any applicable municipal levies. An understanding of what each registration is, what benefits he gets from being registered, and how to register must be developed.

SCD.9.6.5 (b)

Legislative Management Functions

- (i) Labour Law:
Knowledge of the labour legislation and the implications for the business is required. This includes Skills Development Levy (SDL), Work Place Skills Plans (WPSP), Unemployment Insurance Fund UIF), Workman's' Compensation (WC), Labour Relations Act (LRA), Basic Conditions of Employment Act (BCEA), and the applicable minimum wages for the area.
- (ii) OHS Act:
All aspects of the OHS Act (dealing with safety and health) and the implications must be understood. A safety officer who has the appropriate level of understanding and knowledge must be appointed within each Targeted Enterprise.
- (iii) Environmental Management Plan:
An environmental management plan needs to be submitted regarding how the environment will be managed for the duration of the contract, and what restoration will take place at the end of the contract. An understanding of the importance and content of this plan must be gained.
- (iv) Adjudication/Arbitration:
This activity involves knowing what legal recourse is available when disputes/disagreements are not resolved. This knowledge must include the processes to be followed and where to go to implement proceedings. These functions will generally require the input of the company lawyer, company accountant, HR manager, Health and Safety Specialist, and Environmental Specialist.

SCD.9.6.6

General

SCD.9.6.6(a)

Administrative Functions

- (i) Filing systems:
This activity includes establishing company filing systems that are efficient and effective. It also includes knowing the importance of filing, what must be filed and how it should be filed.
- (ii) Office set-out:

Knowledge of the layout of the site office buildings position and the organisation of the offices and systems within the buildings is to be imparted.

- (iii) Record keeping:
This activity involves developing knowledge of what records need to be kept and how best to keep them.
- (iv) Good housekeeping:
Good housekeeping is about developing a work approach of keeping the site tidy, cleaning putting away tools and working in an orderly way. Developing good housekeeping assists a company in working efficiently and improving profit margins.
- (v) Communications with staff:
The importance of good communication with staff needs to be understood as well as the effects of good relations with the staff in terms of loyalty and productivity. An understanding must also be gained that good communication enhances supervision and management of the work.
- (vi) Communications on site:
This activity involves establishing communication systems between the site and the office and understanding that effective communication on site leads to good relations and contributes to the smooth running of the site.

The Construction Manager, site clerk and HR Manager will train/coach or mentor the above listed functions.

SCD.9.7

PORTFOLIO OF EVIDENCE

The Contractor is to develop and/or maintain a portfolio of evidence for each Targeted Enterprise. The Portfolio of Evidence is a collection of proof of the training, coaching, guidance and mentoring inputs provided to the Targeted Enterprise and is similar to a log book used by technical students completing experiential training. It is a living document which records the development progress of the Targeted Enterprise and will need to be updated continually throughout the duration of the contract. It remains the property of the Targeted Enterprise and they take it with them to their next contract.

The Portfolio of Evidence should include the following documentation:

- The development path designed for each Targeted Enterprise;
- The training courses completed by the Targeted Enterprise;
- The hours of guiding, coaching and mentoring received for each activity listed in the development plan;
- A list of outcomes achieved at each level for each activity;
- Six-monthly progress reports on the development provided (inputs) versus the actual progress made (output) by the Targeted Enterprise;
- A list of competencies.

SCD.9.8

TRAINING REQUIREMENTS

Only qualified trainers employed by training agencies that are accredited by the relevant Sector Education and Training Authorities (SETA), or other institutions recognised by the Department of Labour shall deliver any training. "Accredited training" refers to both the trainers as well as to the training material. Certificates affirming the successful participation in the various courses shall be presented to each attendant.

The Contractor shall facilitate in the delivery of training by instructing and motivating

the hired labour and relevant Targeted Enterprises regarding attendance and participation. All training shall take place within normal working hours, or as agreed with the trainees.

SCD.9.9 DEVELOPMENT TRAINING

The Contractor will arrange training to support the development of the Targeted Enterprise. This training must be provided by training providers accredited with the relevant SETA pertaining to the course material being presented. The training will take place at hours agreed with the trainees, possibly on a part time basis after hours.

The following training courses are recommended to support the development programme detailed in the contract document:

- (i) NQF Level 2: Construction Contractor - Business owner and administration officer;
- (ii) Tender training NQF Level 3 – Business owner / Technical expert;
- (iii) Computer literacy training - Business owner and admin officer – Microsoft Windows, email, Microsoft Word and Microsoft Excel;
- (iv) General bookkeeping relevant to construction - Business owner and admin officer;
- (v) Tendering NQF Level 4 and 5 – Business owner / Technical expert;
- (vi) Construction supervision (Roadworks) NQF Level 4 – Business owner / Technical expert.

SCD.9.10 SAFETY TRAINING

The Targeted Enterprise safety representative is to be fully trained in all aspects of safety and his duties in this regard. The owner of the Targeted Enterprise is to be trained on their responsibilities regarding safety regulations.

SCD.9.11 CONSTRUCTION SKILLS TRAINING

The focus of training provided on the contract should be to support the development of the Targeted Enterprise. Construction skills training will be approved by the PMT only when appropriate.

The Targeted Enterprise, their workforce and hired labour that show initiative will be entitled to receive structured training that will improve on-task skills necessary for the execution and successful completion of the works. The Contractor, in conjunction with the Employer's Agent, shall monitor the progress of the hired labour and each Targeted Enterprise closely and shall identify those who, in their collective opinion, will benefit from structured construction skills training as may be provided for in the contract, and where required by the Employer's Agent shall make recommendations in this regard. The final list of candidates shall be decided between the Contractor and the Employer's Agent, and those selected shall receive formal construction skills training in a programmed and progressive manner throughout the duration of the contract.

The training programme shall offer complete courses that could comprise some or all of the following modules:

- (i) Use and maintenance of hand tools;
- (ii) Operation of equipment;
- (iii) Manufacture and installation of minor precast concrete units;
- (iv) Erect, dismantle and maintain formwork;

- (v) Basic concrete skills;
- (vi) Excavation, backfill and compaction;
- (vii) Bricklaying;
- (viii) Erosion protection using stone pitching, gabions or reno mattress.

SCD.9.12 TRAINING VENUE FACILITY

The training venue facility to be provided by the Contractor. This facility shall be used to deliver all training, irrespective of whether it is delivered in terms of SCD or C3.4.3 of the Particular Specifications.

SCD.10 MEASUREMENT AND PAYMENT

Note:

In order to avoid duplication of training programmes and training facilities, all structured training, including the training described in this C3.4.3: Small Contractor Development, shall be measured and paid for in terms of the pay items provided for training as follows:

Item	Unit
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SCD.10.1 Procurement of Targeted Enterprise subcontractors as described in C3.4.3:

- (a) Contractor's charge for the management and execution of the procurement process for Targeted Enterprise subcontractors:
 - (i) Procurement process for the totality of all tenders concluded for the appointment of CIDB contractor grading designation 1CE PE Targeted Enterprise subcontractors (8 x individual tenders prescribed, 100 copies of the tender document required for each individual tender).....number (No)
 - (ii) Procurement process for the totality of all tenders concluded for the appointment of CIDB contractor grading designation 2CE PE Targeted Enterprise subcontractors (5 x individual tenders prescribed, 80 copies of the tender document required for each individual tender).....number (No)
 - (iii) Procurement process for the totality of all tenders concluded for the appointment of CIDB contractor grading designation 3CE PE Targeted Enterprise subcontractors (1 x individual tenders prescribed, 60 copies of the tender document required for each individual tender)number (No)
 - (iv) Procurement process for the totality of all tenders concluded for the appointment of CIDB contractor grading designation 4CE PE Targeted Enterprise subcontractors (1 x individual tenders prescribed, 50 copies of the tender document required for each individual tender).....number (No)

The unit of measurement shall be the number of individual subcontract agreements concluded with Targeted Enterprise subcontractors in accordance with the procurement process described in this C3.4.3.

Each tendered rate shall be in full compensation for the management and execution of the Targeted Enterprise procurement process in the relevant CIDB contractor grading

designation scheduled, including for the compilation, printing, binding and issue of the tender documents for each tender, for the advertising of each tender, for the provision of the venue and the conducting of each compulsory briefing session for tenderers, for the conducting of each tender opening process, for the adjudication of the tenders received for each tender, for the preparation of each tender adjudication report and the review thereof in conjunction with the PMT, for the award of each tender and for the conclusion of the subcontract agreement with each successful Targeted Enterprise tenderer.

Item	Unit
SCD.10.2	
Construction Works for Targeted Enterprise subcontractors:	
(a) Payments associated with the construction Works carried out by Targeted Enterprise subcontractors appointed in terms of C3.4.3provisional sum (Prov sum)	
(b) Handling costs and profit in respect of sub item SCD.10.02(a) above.....percentage (%)	
(c) Supply of materials and small plant to assist Targeted Enterprise subcontractors appointed in terms of C3.4.3 provisional sum (Prov sum)	
(d) Handling costs and profit in respect of sub item SCD.10.02(c) above.....percentage (%)	
(e) Contractor's charge for the management of the Targeted Enterprise subcontractors appointed in terms of C3.4.3lump sum (Sum)	

Expenditure under sub items SCD.10.02(a) and (c) shall be in accordance with clause 6.6 of the General Conditions of Contract, 3rd Edition 2015.

The provisional sum for sub item SCD.10.02(a) is provided to cover the total cost of the construction Works carried out by the Targeted Enterprises as certified by the Employer's Agent, in separate payments for each Targeted Enterprise in accordance with C3.4.3 of the Particular Specifications.

The tendered percentage for sub item SCD.10.02(b) is the percentage of the amount actually spent under sub item SCD.10.02(a), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the construction Works carried out by the Targeted Enterprise subcontractors.

The provisional sum for sub item SCD.10.02(c) is provided to cover the total cost of the materials and small plant supplied by the Contractor to assist the Targeted Enterprises as certified by the Employer's Agent, in separate payments for each Targeted Enterprise in accordance with C3.4.3 of the Particular Specifications.

The tendered percentage for sub item SCD.10.02(d) is the percentage of the amount actually spent under sub item SCD.10.02(c), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the supply of materials and small plant by the Contractor to assist the Targeted Enterprise subcontractors.

The tendered lump sum for sub item SCD.10.02(e) shall include full compensation for the registration of all the subcontract agreements and the management of all the Targeted Enterprise subcontracts, including for the provision of the necessary management support, coaching, guidance and mentoring to the Targeted Enterprise subcontractors.

ALLOCATION OF PRESCRIBED MINIMUM NUMBER OF TARGETED ENTERPRISE

SUBCONTRACTORS FOR WORKS TO BE CONSTRUCTED IN TERMS OF C3.4.3

The prescribed minimum number of Targeted Enterprise subcontractors to be appointed for each CIDB contractor grading designation is indicated in the following table. The Contractor may employ more than the minimum number in any particular contractor grading designation.

SECTION	DESCRIPTION	1CE PE Max: R0,20 m	2CE PE Max: R0,65 m	3CE PE Max: R2,00 m	4CE PE Max: R4,00 m	5CE PE Max: R6,50 m
		X(1)				
				X(2)		
		X(1)				
		X(3)	X(1)			
		X(1)				
		X(1)				
		X(1)				
			X(1)			
			X(1)			
					X(2)	
	TOTAL NUMBER OF TARGETED ENTERPRISE SUBCONTRACTORS PRESCRIBED FOR EACH CIDB CONTRACTOR GRADING DESIGNATION	8	3	2	2	

ITEMS GROUPINGS AND VALUE TO BE DETERMINED:

1. Pipe laying
2. Brick manhole construction
3. Valve chamber construction
4. Brick headwall construction
5. Installation of reno mattresses, gabions and retaining walls.
6. Laying of concrete kerbs, channels and v drains
7. Landscaping
8. Erection of fencing, guard rails and hand rails
9. Road marking and erection of sign boards
10. Construction of sub soil drains incorporating

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.

Dwg No	Description	Date of Issue	
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”

PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN

See over leaf.

C4.2 CONDITIONS ON SITE

There is no specific geotechnical information or other site information.

C4.3 TEST RESULTS

There are no specific test results.

PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN

20.

C4.2 CONDITIONS ON SITE

C4.3 TEST RESULTS