



CLUSTER
Human Settlement, Engineering, and Transport
UNIT
Engineering
DEPARTMENT
Roads Provision

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 website

Contract No: 3R-31547

Contract Title: WORK PACKAGE 1 for TRK 83662 in SENZOKUHLE AREA, WARD 3

Est. CIDB Grade/ Class: 5 CE

CLARIFICATION MEETING AND QUERIES

Clarification Meeting: Compulsory Clarification Meeting. Questions and answers from the clarification meeting will be uploaded on the 7th August 2025

Meeting Location, Date, Time: At number 15 Hospital Road, Hillcrest (corner Delamore Road and Hospital Road) and there will be a site visit thereafter on 17 July 2025 at 10:00am

Queries can be addressed to: Name: Mpume Nyanisa

The Employer's Agent's: Tel: (031) 765 3984

Representative: eMail: mpume.nyanisa@durban.gov.za

TENDER SUBMISSION

The Tender Offer (hard copy) shall be delivered to:

Delivery location: The Tender Box in the foyer of the Municipal Building, 166 KE Masinga Road, Durban

Tenderers are to also make an **electronic submission** via the eThekweni Municipality **JDE System (SSS Module)** (see Tender Data: C.2.13).

**JDE Queries
Contact:**

Lindo Dlamini: Tel: 031-322-7133 / 031-322-7153
Email: supplier.selfservice@durban.gov.za

Closing Date/ Time: Friday, 15 August 2025 at 11h00

Tender Offers submitted via any means other than that stated in the Tender Data will be deemed invalid

Issued by:

ETHEKWINI MUNICIPALITY

Deputy Head: Roads Provision

Date of Issue: 01/07/2024

Document Version 12/05/2025

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Tenderer Name:			VAT Registered: Yes No
	Price (excl)	VAT	Price (incl)
Submitted: R		R	R
Corrected: 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 works to upgrade of TRK 83662 in Senzokuhle Area, Ward 03. The contract entails the upgrading of existing gravel road to an asphalt surface. This upgrade includes the installation of essential stormwater drainage systems, kerbing, retaining walls, and the construction of a portal culvert.

Subject	Description	Tender Data
Employer	The Employer is the eThekweni Municipality as represented by: Deputy Head: Roads Provision	C.1.1.1
Tender Documents	Documentation is to be downloaded from the National Treasury's eTenders website or the eThekweni Municipality Website : <ul style="list-style-type: none"> • https://www.etenders.gov.za/ • https://www.durban.gov.za/pages/business/procurement 	C.1.2
CIDB Eligibility	It is <u>estimated</u> that Tenderers should have a CIDB contractor grading designation of 5 CE (or higher).	C.2.1.2
Clarification Meeting	At number 15 Hospital Road, Hillcrest (corner Delamore Road and Hospital Road) and there will be a site visit thereafter on 17 July 2025 at 10:00am	C.2.7
Seek Clarification	Queries relating to these documents are to be addressed to the Employer's Agent's Representative whose contact details are: Name: Mpume Nyanisa Tel: (031) 765 3984 eMail: mpume.nyanisa@durban.gov.za	C.1.4
Submitting a Tender Offer	The Tender Offer (hard copy) shall be delivered to: The Tender Box in the foyer of the Municipal Building, 166 KE Masinga Road, Durban An electronic submission , via the eThekweni Municipality JDE System (SSS Module) , is also to be made. Refer to Part T1.1.2 and Tender Data: C.2.13. Notwithstanding the electronic submission , a tender offer will only be deemed valid if the "hard copy" submission has been made.	C.2.13
Closing Time	The Tender Offer (hard copy) shall be delivered, and the electronic submission completed, both on or before Friday, 15 August 2025 , at or before 11h00 .	C.2.15
Evaluation of Tender Offers	The 80/20 Price Preference Point System , as specified in the SCM Policy: Section 52: Preferential Procurement will be applied in the evaluation of tenders. Tender Data: C.3.11: Evaluation of Tender Offers details the awarding of Preference Points, and other related evaluation requirements.	C.3.11

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

Applicable CIDB B.U.I.L.D. Programme Standards	
CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts	No
CIDB Standard for Developing Skills through Infrastructure Contracts	No

T1.1.2: INFORMATION REGARDING THE ETHEKWINI JDE SYSTEM

This Part (T1.1.2) is for information purposes only. Compliance requirements are stated in **Part T1.2: Tender Data**.

1) General

eThekwini Municipality Bids, Tenders and Quotations (hereafter referred to as Tenders) are going to be submitted using the JDE System. This JDE System will be used for:

- Viewing of available (open) Tenders,
- Downloading procurement documentation for Tenders,
- Uploading completed and signed Tender documentation,
- Completion and submission of Tenders electronically,
- Viewing the Tender opening schedule.

2) Registrations

To be granted access to the **JDE System** prospective service providers must be registered on the **National Treasury's Central Supplier Database (CSD)**, the **eThekwini Municipality Supplier Portal**, and the **eThekwini Municipality JDE System**.

National Treasury: Central Supplier Database

- Registration can be made on <https://secure.csd.gov.za>.
- Service Providers will be issued a "MAAA" number when registered.

eThekwini Municipality Supplier Portal

- Registration can be made on <https://www.durban.gov.za> by following these links:
>Business >Supply Chain Management (SCM) >Accredited Supplier & Contractor Database.

eThekwini Municipality JDE System

- Service providers requiring access must send an email to supplier.selfservice@durban.gov.za. The following information is required: Copy of the **Director's ID**.
- On receipt of email, SCM Unit will respond with the login credentials & a link to the **JDE System**.

3) Assistance with using the JDE System

The following SCM Official(s) can be contacted in connection with any queries regarding the use of the **JDE System**:

Lindo Dlamini

Tel: 031 322 7153 or 031 322 7133

Email: supplier.selfservice@durban.gov.za

4) Viewing of available tenders

By following link <https://rfq.durban.gov.za/jde/E1Menu.maf> prospective Service Providers will be able to view available (open) Tender opportunities without signing into the system. However, Service Providers will not be able to respond to a Tender without being signed into the system using a JDE User ID and Password.

5) Tender documentation

By accessing the **JDE System** (using <https://rfq.durban.gov.za/>) and viewing any available Tenders, prospective Service Providers will be able to download the relevant Tender documentation.

The Tender documentation consists of the **TENDER** and **CONTRACT Parts**, as described in the INDEX, and will include any drawings and other information (if applicable). Referred to or included in the documentation are the **Standard Conditions of Tender (and associated Tender Data)**, and the **Conditions of Contract (and associated Contract Data)** which will govern the tendering and contract processes respectively.

6) Submission of tender offers

Reference is to be made to the **Tender Data: C.2.13** that specifies compliance requirements.

Tender Offers are to be delivered, in "hard copy" format, to the Delivery Location as stated in the **Tender Data**. In addition to the above, Tender Offers are also to be SUBMITTED ELECTRONICALLY (uploaded) on the eThekwini Municipality JDE System (Supplier Self Service (JDE-SSS) Module). Notwithstanding the **electronic submission**, a tender offer will only be deemed valid if the "hard copy" submission has been made. Bidders are responsible for resolving all access rights and submission queries on the JDE System before the tender closing date/ time, as stated in the **Tender Data: C.2.15**.

7) Viewing the Tender opening schedule

Users on the **JDE System** will be able to view the **Tender Opening Schedule** for each closed Tender. The tender opening schedule will also be made available on the eThekwini Municipal website at URL:

<https://www.durban.gov.za/pages/business/publication-of-received-bids>

T1.1.3: NOTES TO TENDERERS

These “**Notes to Tenderers**” are intended to provide guidance to Tenderers regarding tendering obligations and requirements. Compliance requirements are stated in the relevant parts of the **Tender Data: T1.2**.

eThekwini Supply Chain Management Policy (SCMP)

The requirements as stated in the Employer’s SCM Policy include, but are not limited to, the following:

1) Section 14(4): ETM Supplier Database

The eThekwini Supply Chain Management Policy requires suppliers/ service providers/ contractors to be registered on the eThekwini Municipality’s Supplier Database (Vendor Portal).

In the event of the Tenderer not being registered on the eThekwini Municipality’s Supplier Portal, 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 is to be noted:

- The information for registration as in the possession of the eThekwini Municipality will apply.
- It is the Tenderer’s responsibility to ensure that the details submitted to the Municipality are correct.
- Tenderers are to register prior to the submission of tenders.

2) Section 20(1)(d)(i): Audited Financial Statements

Audited Financial Statements (prepared for auditing) are required to be submitted if the value of the tender offer exceeds R10 million (incl. VAT). See **Returnable Form T2.2.4.: MBD 5** and **Returnable Form T2.2.5: Contracts awarded by Organs of State** in the past 5 years.

3) Section 20(1)(d)(iii): Contracts Awarded during the past 5 Years

Tenderers are to include with their submission a listing of any contracts awarded to the Tenderer during the past 5 years, including particulars of any material non-compliance or dispute concerning the execution of the contracts. Tenderers are referred to **Returnable Form T2.2.5.: MBD 5**

4) Section 20(1)(d)(ii), Section 28(1)(c) and Section 29(10): Municipal Fees

Tenderers are to refer to **Returnable Form T2.2.10: Declaration of Municipal Fees** to certify that they have no undisputed commitments for municipal services towards any municipality. Prior to an award, a Tenderer’s municipal rates and taxes cannot be in arrears. Should a Tenderer be in arrears with respect to municipal services and has formalised an agreement with the respective municipality to offset the arrears, the agreement must be in place at time of tender closing.

5) Section 28(2)(d), Section 28(2)(h) and Clause 29(12): Certifications and Registrations

CIDB Registration and Status, B-BBEE Certificates, and Tax Compliance Status PINs must be valid at tender closing, and before final award.

The Tenderer’s Tax Compliance Status, CIDB Registration and Status (if required), and B-BBEE Level Status (if required), will be verified using the National Treasury Central Supplier Database (CSD). Tenderers are referred to **Returnable Form T2.2.1.: Compulsory Enterprise Questionnaire**.

It is the Tenderer’s responsibility to ensure that their data on the CSD is kept updated and correctly reflects the status of the tendering entity.

6) Section 28(2)(e): Joint Ventures (JV)

Each party of a JV must submit separate Tax Compliance Status PINs.

Also, and unless otherwise stated, the requirements for a single entity submission in terms of documentation requirements, will apply to each member of a JV making a submission.

As proof that a JV has been formalised, or that the parties to the JV agree to formalise the JV should they be successful in being recommended for the award of this tender, Tenderers are referred to **Returnable Form T2.2.14: Joint Venture Agreements**.

CIDB**Regulation 25(8)**

- 7) 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. Tenderers are referred to **CIDB Inform Practice Note #32: "Application of the Potentially Emerging (PE) Status"**.

B.U.I.L.D. Programme

- 8) A programme to accelerate transformation in the construction industry, increase the capacity of the construction industry to deliver infrastructure and support the growth of emerging contractors, was launched on 14 March 2024 by the Deputy Minister of Public Works and Infrastructure and the Construction Industry Development Board.

Details of the B.U.I.L.D. Programme were published in a Government Gazette in 2020 (GG 43726) and B.U.I.L.D. has gradually been phased in at various levels of government and the private sector. The CIDB, a public entity with the mandate to promote improved performance in construction, oversees the programme and manages the B.U.I.L.D Fund.

The B.U.I.L.D programme determines that public sector entities which implement construction projects, that meet certain minimum requirements, must include developmental goals to the deliverables defined in the tenders. Contractors are required to include these goals in the plans and pricing when they submit their tender bids.

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 C** of the CIDB Standard for Uniformity in Construction Procurement as published in Government Gazette No 42622, Board Notice 423 of 8 August 2019, as duplicated below.

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.

Annex C

Standard Conditions of Tender

C.1	General		<i>interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.</i>
C.1.1	Actions		
C.1.1.1	The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.	C.1.1.3	The employer shall not seek, and a tenderer shall not submit a tender, without having a firm intention and the capacity to proceed with the contract.
C.1.1.2	The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.	C.1.2	Tender Documents The documents issued by the employer for the purpose of a tender offer are listed in the Tender Data .
		C.1.3	Interpretation
		C.1.3.1	The Tender Data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.
		C.1.3.2	These conditions of tender, the Tender Data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender.
	<i>Note:</i> 1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result. 2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family		

<p>C.1.3.3 For the purposes of these conditions of tender, the following definitions apply:</p> <p>a) conflict of interest means any situation in which:</p> <ul style="list-style-type: none"> i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially; ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or iii) incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee. <p>b) comparative offer means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;</p> <p>c) corrupt practice means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;</p> <p>d) fraudulent practice means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;</p>	<ul style="list-style-type: none"> c) no acceptable tenders are received; d) there is a material irregularity in the tender process.
<p>C.1.4 Communication and employer's agent</p> <p>Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the Tender Data.</p>	<p>C.1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the <i>original</i> tender invitation was advertised.</p>
<p>C.1.5 Cancellation and Re-Invitation of Tenders</p> <p>C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-</p> <ul style="list-style-type: none"> a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation; b) funds are no longer available to cover the total envisaged expenditure; 	<p>C.1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.</p> <p>C.1.6 Procurement procedures</p> <p>C.1.6.1 General</p> <p>Unless otherwise stated in the Tender Data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.</p> <p>C.1.6.2 Competitive negotiation procedure</p> <p>C.1.6.2.1 Where the Tender Data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.</p> <p>C.1.6.2.2 All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the Tender Data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.</p> <p>Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.</p>

C.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.	submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.
C.1.6.2.4 The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.	C.2.2 Cost of tendering
C.1.6.3 Proposal procedure using the two stage-system	C.2.2.1 Accept that, unless otherwise stated in the Tender Data , the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.
C.1.6.3.1 Option 1	C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.
Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the Tender Data , and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.	C.2.3 Check documents
C.1.6.3.2 Option 2	Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
C.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.	C.2.4 Confidentiality and copyright of documents
C.1.6.3.2.2 The employer shall evaluate tenders received during the second stage, in terms of the method of evaluation stated in the Tender Data , and award the contract in terms of these conditions of tender.	Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.
C.2 Tenderer's obligations	C.2.5 Reference documents
C.2.1 Eligibility	Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.
C.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the Tender Data and the tenderer, or any of his principals, is not under any restriction to do business with employer.	C.2.6 Acknowledge addenda
C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to	Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary apply for an extension to the closing time stated in the Tender Data , in order to take the addenda into account.
	C.2.7 Clarification meeting
	Attend, where required, a clarification meeting at which tenderers may familiarize themselves

<p>with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the Tender Data.</p>	<p>C.2.12 Alternative tender offers</p>
<p>C.2.8 Seek clarification</p> <p>Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the Tender Data.</p>	<p>C.2.12.1 Unless otherwise stated in the Tender Data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.</p>
<p>C.2.9 Insurance</p> <p>Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the Contract Data. The tenderer is advised to seek qualified advice regarding insurance.</p>	<p>C.2.12.2 Accept that an alternative tender offer must be based only on the criteria stated in the Tender Data or criteria otherwise acceptable to the employer.</p> <p>C.2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.</p>
<p>C.2.10 Pricing the tender offer</p> <p>C.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the Tender Data.</p> <p>C.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.</p> <p>C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the Contract Data.</p> <p>C.2.10.4 State the rates and prices in Rand unless instructed otherwise in the Tender Data. The conditions of contract identified in the Contract Data may provide for part payment in other currencies.</p>	<p>C.2.13 Submitting a tender offer</p> <p>C.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the Contract Data and described in the scope of works, unless stated otherwise in the Tender Data.</p> <p>C.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.</p> <p>C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the Tender Data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.</p>
<p>C.2.11 Alterations to documents</p> <p>Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.</p>	<p>C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the Tender Data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.</p>
	<p>C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the</p>

<p>employer's address and identification details stated in the <i>Tender Data</i>, as well as the tenderer's name and contact address.</p>	
<p>C.2.13.6 Where a two-envelope system is required in terms of the <i>Tender Data</i>, place and seal the returnable documents listed in the <i>Tender Data</i> in an envelope marked "financial proposal" and place the remaining returnable documents in an envelope marked "technical proposal". Each envelope shall state on the outside the employer's address and identification details stated in the <i>Tender Data</i>, as well as the tenderer's name and contact address.</p>	
<p>C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the <i>Tender Data</i>.</p>	<p>C.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the <i>Tender Data</i> after the closing time stated in the <i>Tender Data</i>.</p>
<p>C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.</p>	<p>C.2.16.2 If requested by the employer, consider extending the validity period stated in the <i>Tender Data</i> for an agreed additional period with or without any conditions attached to such extension.</p>
<p>C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the <i>Tender Data</i>.</p>	<p>C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).</p>
<p>C.2.14 Information and data to be completed in all respects</p> <p>Accept that tender offers, which do not provide all the data or information requested completely and in the form required, may be regarded by the employer as non-responsive.</p>	<p>C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".</p>
<p>C.2.15 Closing time</p>	<p>C.2.17 Clarification of tender offer after submission</p>
<p>C.2.15.1 Ensure that the employer receives the tender offer at the address specified in the <i>Tender Data</i> not later than the closing time stated in the <i>Tender Data</i>. Accept that proof of posting shall not be accepted as proof of delivery.</p>	<p>Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.</p> <p><i>Note: Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.</i></p>
<p>C.2.15.2 Accept that, if the employer extends the closing time stated in the <i>Tender Data</i> for any reason, the requirements of these conditions of tender apply equally to the extended deadline.</p>	<p>C.2.18 Provide other material</p>
	<p>C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.</p>

	<p>Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.</p>
C.2.18.2	Dispose of samples of materials provided for evaluation by the employer, where required.
C.2.19 Inspections, tests and analysis Provide access during working hours to premises for inspections, tests and analysis as provided for in the <i>Tender Data</i> .	<p>requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:</p> <ul style="list-style-type: none"> a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements; b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.
C.2.20 Submit securities, bonds and policies If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies and certificates of insurance required in terms of the conditions of contract identified in the <i>Contract Data</i> .	C.3.2 Issue Addenda If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the <i>Tender Data</i> . If, as a result a tenderer applies for an extension to the closing time stated in the <i>Tender Data</i> , the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.
C.2.21 Check final draft Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.	C.3.3 Return late tender offers Return tender offers received after the closing time stated in the <i>Tender Data</i> , unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.
C.2.22 Return of other tender documents If so instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the <i>Tender Data</i> .	C.3.4 Opening of tender submissions C.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the <i>Tender Data</i> . Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.
C.2.23 Certificates Include in the tender submission or provide the employer with any certificates as stated in the <i>Tender Data</i> .	C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the <i>Tender Data</i> , the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main tender offer only.
C.3 The employer's undertakings	
C.3.1 Respond to requests from the tenderer	
C.3.1.1 Unless otherwise stated in the <i>Tender Data</i> , respond to a request for clarification received up to five (5) working days before the tender closing time stated in the <i>Tender Data</i> and notify all tenderers who collected tender documents.	
C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying	

C.3.4.3	Make available the record outlined in C.3.4.2 to all interested persons upon request.	c) is responsive to the other requirements of the tender documents.
C.3.5	Two-envelope system	C.3.8.2
C.3.5.1	Where stated in the Tender Data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the Tender Data and announce the name of each tenderer whose technical proposal is opened.	A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would: <ul style="list-style-type: none"> a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work, b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or c) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified. <p>Reject a non-responsive tender offer and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.</p>
C.3.5.2	Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the Tender Data , and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.	
C.3.6	Non-disclosure	C.3.9
	Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.	Arithmetical errors, omissions and discrepancies
C.3.7	Grounds for rejection and disqualification	C.3.9.1
	Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.	Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.
C.3.8	Test for responsiveness	C.3.9.2
C.3.8.1	Determine, after opening and before detailed evaluation, whether each tender offer properly received: <ul style="list-style-type: none"> a) complies with the requirements of these Conditions of Tender, b) has been properly and fully completed and signed, and 	Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for: <ul style="list-style-type: none"> a) the gross misplacement of the decimal point in any unit rate; b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in: <ul style="list-style-type: none"> (i) line-item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or (ii) the summation of the prices. <p>Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.</p>
		C.3.9.4
		Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

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

C.3.10 Clarification of a tender offer

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

C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the **Tender Data** associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	Qualitative interpretation of goal
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

- a) Open and record tender offers received
- b) Determine whether or not tender offers are complete
- c) Determine whether or not tender offers are responsive
- d) Evaluate tender offers
- e) Determine if there are any grounds for disqualification
- f) Determine acceptability of preferred tenderer
- g) Prepare a tender evaluation report
- h) Confirm the recommendation contained in the tender evaluation report .

C.3.11.1 General

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the **Tender Data**.

C.3.12 Insurance provided by the employer

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

C.3.13 Acceptance of tender offer

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

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
- b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
- c) has the legal capacity to enter into the contract;
- d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
- e) complies with the legal requirements, if any, stated in the **Tender Data**; and
- f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

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

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

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

C.3.15 Complete adjudicator's contract

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

C.3.16 Registration of the award

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the cidb Register of Projects.

C.3.17 Provide copies of the contracts

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

C.3.18 Provide written reasons for actions taken

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

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.

C.1: GENERAL**C.1.1 The employer:**

The Employer for this Contract is the **eThekwini Municipality** as represented by:

Deputy Head: **Roads Provision**

C.1.2 Tender documents:

The Tender Documents issued by the Employer comprise:

- 1) This procurement document.
- 2) The **Conditions of Contract** identified in Section C1.2.1.1. Tenderers/ Contractors are required to obtain their own copies.
- 3) The **Specifications** identified in Section C3.3.1. Tenderers/ Contractors are required to obtain their own copies.
- 4) **Drawings**, if applicable, 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 Supply Chain Management Policy (as at advertising date).
 - 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.
 - CIDB Standard for Developing Skills Through Infrastructure Contracts, published in Gazette Notice No. 48491 of 28 April 2023.
 - CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, published in Gazette Notice No. 36190 of 25 February 2013.
 - Any other eThekwini Policy documents referenced in the Tender Documents.

Electronically downloaded documentation is obtainable from the National Treasury's **eTenders Website** or the **eThekwini Municipality Website** at URL:

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

C.1.4 Communication and employer's agent:

The Employer's Agent is:		The Employer's Agent's Representative is:
Name: Sandile Khulu Tel: (031) 311 7628 eMail:sandile.khulu@durban.gov.za		Name: Mpume Nyanisa Tel: (031) 765 3984 eMail: mpume.nyanisa@durban.gov.za

The Tenderer's contact details, as indicated on **Returnable Document T2.2.1: Compulsory Enterprise Questionnaire**, shall be deemed as the only valid contact details for the Tenderer for use in communications between the Employer's Agent and the Tenderer during tender evaluation.

C.2: TENDERER'S OBLIGATIONS

C.2.1 Eligibility:

Entities may only submit one (1) tender offer, either as a single tendering entity or as a partner of a joint venture. Should a tendering entity submit more than one (1) tender, all submissions by that tendering entity, including submissions where the entity is a partner of a joint venture, will be deemed not to be eligible.

C.2.1.1 Eligibility: General

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

- (a) In the event of a Compulsory Clarification Meeting:
 - i) the Tenderer fails to attend the Compulsory Clarification Meeting, or
 - ii) the Tenderer fails to have **Returnable Document T2.2.2: Certificate of Attendance at Clarification Meeting / Site Inspection** signed by the Employer's Agent or their representative.
- (b) At the time of tender closing, the Tenderer is not registered on the **National Treasury Central Supplier Database (CSD)** and the **eThekweni Municipality Supplier Portal**. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture. Tenderers are to reference **Returnable Document T2.2.1: Compulsory Enterprise Questionnaire** (section 1.5) and **Returnable Document T2.2.12: "CSD Registration Report"**.
- (c) In the case of Joint Venture (JV) submissions, two or more JV entities have common directors/ shareholders or common entities tendering for the same works.
- (d) The following documentation is to be completed in full, signed, and returned with the tender submission. Failure to comply will result in the tender offer being deemed non-responsive:
 - T2.2.1: Compulsory Enterprise Questionnaire.
 - T2.2.3: MBD 4: Declaration of Interest.
 - T2.2.4: MBD 5: Declaration for Procurement Above R10 Million (if applicable).
 - T2.2.7: MBD 6.2: Declaration for Local Production and Content (if applicable).
 - T2.2.8: MBD 8: Declaration of Bidder's Past SCM Practices.
 - T2.2.9: MBD 9: Certificate of Independent Bid Determination.
 - T2.2.10: Declaration of Municipal Fees
- (e) The certificates listed in the **Tender Data: C.2.23: Certificates** are to be included with the tender submission. Failure to comply will result in the tender offer being deemed non-responsive. These include:
 - T2.2.1: Compulsory Enterprise Questionnaire
 - SARS Tax Compliance Status – PIN Issued.
 - T2.2.6: MBD 6.1: Preference Points Claim
 - B-BBEE Status Level of Contribution Certificate (if applicable).
 - T2.2.12: Central Supplier Database (CSD) Report.
 - T2.2.13: CIDB Registration and Status.

C.2.1.2 Eligibility: CIDB

Tenderers are to reference the provisions of **Tender Data: C.2.23: Certificates** and **Returnable Document: T2.2.13: Verification of CIDB Registration and Status** with respect to CIDB registration.

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

Joint ventures are eligible to submit tenders provided that:

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

C.2.1.3 Eligibility: Tenderer’s Experience

Tenderers are to complete and sign **Returnable Form T2.2.16: Eligibility: Experience of Tenderer**.

Only those Tenderers that can demonstrate experience and submit the associated documentation/information, in works of a similar nature, within the past 10 years, will be eligible to have their tenders evaluated in terms of Clause C.3.11.

- **Table 1:** The **Experience Requirement** is specified on this table.
- **Table 2:** The experience is to be **Similar in Nature** to that specified on this table. Tenderers are to note the exclusions (if any) stated on this table.
- **Table 3:** The **Documentation/ Information** that is required to be included in this submission is specified on this table (which includes the Notes below the table).
- Tenderers may submit experience gained as **Sub-Contractors or Main Contractors**.
- **Guidance** on the completion of the **Experience Submission Form** is provided on the first page of **Returnable Form T2.2.16**.

Tenderers are to indicate the documentation that has been included in the tender submission, in support of each experience submission, in the shaded column on Page **51**.

Should there be insufficient evidence for verification of the information submitted for any specific experience submission, that experience submission will be deemed invalid.

Table 1: Experience Requirement

A minimum of 5 contracts, with works of a similar nature, within the past 10 years, each with a value of 50% of the tender value submitted for this tender on the **Form of Offer (C1.1.1)**.

Table 2: Works of a Similar Nature	
Provision of Roads and Ancillary Works	
<ul style="list-style-type: none"> Projects of a similar nature that will be considered will be one, or a combination of, the following types of projects: <ul style="list-style-type: none"> new road construction road widening/upgrades provision of interim roadway related services to informal settlements intersection improvements gravel to surfaced road upgrades access road upgrades major parking areas 	
<ul style="list-style-type: none"> Each project must consist of <u>at least two</u> of the following elements: <ul style="list-style-type: none"> bulk earthworks roadway layer-works asphalt roadway surfacing kerbing / channelling sidewalk / walkway construction stormwater drainage traffic calming measures retaining structures dealing with underground services (watermains, sewers, electricity, communication infrastructure) 	
<ul style="list-style-type: none"> Projects that will be <u>excluded</u> are: <ul style="list-style-type: none"> road rehabilitation projects the construction of gravel roads road maintenance projects 	

Table 3: Documentation / Information Requirements				
Note: an "X" in this table indicates that the associated documentation should be provided, if applicable.	Works as Sub-Contractor		Works as Main Contractor	
	Current Contracts	Completed Contracts	Current Contracts	Completed Contracts
Proof of Sub-Contract Agreement See Note 1.	X	X	-	-
Letter of Award OR Form of Offer & Acceptance See Note 2.	-	-	X	X
Most recent Payment Certificate (with Quantities summary), OR Invoice (with Quantities summary). See Note 3.	X	-	X	-
Final Payment Certificate (with Quantities summary), OR Invoice (with Quantities summary). See Note 4.	-	X	-	X
Completion Certificate. See Note 5.	-	-	-	X
Scope of Work See Note 6.	To be indicated on individual experience submission form			

NOTES (for Table 3)

- To include the names of the parties, the managing entity's name, the effective dates, and the signature(s) page, all pertaining to the agreement.
- Issued by the Client / Employer.
- Proof of the most recent payment received from the Main Contractor or Client/ Employer, OR the most recent submitted INVOICE. Whichever of these documents is submitted, a summary breakdown of quantities is to accompany that document.
- Proof of the final payment received from the Main Contractor or Client/ Employer, OR the most recent submitted INVOICE. Whichever of these documents is submitted, a summary breakdown of quantities is to accompany that document.
- Issued by the Client/ Employer.

6. If executed as a Sub-Contractor, the Scope-of-Work should be indicative of only the works carried out by the Sub-Contractor, and not the overall Scope-of-Work of the main contract.
If executed as a Main Contractor, the overall contract Scope-of-Work is to be indicated.

C.2.2.2 The cost of the tender documents:

Replace this paragraph with the following:

“Documents are to be downloaded, free of charge, from the **National Treasury’s eTenders website** or the **eThekwini Municipality’s Website**.”

C.2.6 Acknowledge addenda:

Add the following paragraphs:

“Addenda will be published on the **eThekwini Municipality website** as stated in **Tender Data: C.1.2**. Tenderers are to ensure that this 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 WILL result in the tender submission being made non-responsive.”

C.2.7 Clarification meeting:

At number 15 Hospital Road, Hillcrest (corner Delamore Road and Hospital Road) and there will be a site visit thereafter on 17 July 2025 at 10:00am

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.

C.2.12 Alternative tender offers:

No alternative tender offers will be considered.

C.2.13 Submitting a tender offer:

The signed Tender Offer (“hard copy”) is to be sealed in an envelope, addressed to the City Manager, marked with the **identification details** and be delivered to the **delivery address**, both as stated below.

The **Tender Offer** (hard copy) is to be delivered to the following **delivery address**:
the Tender Box in the foyer of the Municipal Building, 166 KE Masinga Road, Durban

Identification details to be shown on the hard copy package are:

- Contract No. : **3R-31547**
- Contract Title : **WORK PACKAGE 1 for TRK 83662 in SENZOKUHLE AREA, WARD 3**

Tender Offers are also to be **SUBMITTED ELECTRONICALLY** (uploaded) on the eThekwini Municipality **JDE System** (Supplier Self Service (SSS Module)). For information pertaining to the JDE System, Tenderers are referred to **Section T1.1.2**.

Notwithstanding the **electronic submission**, a tender offer will only be deemed valid if the “hard

copy” submission has been made.

The Tender documentation, issued by the eThekweni Municipality (refer to **Tender Data: C.1.2**), is to be printed in its entirety. Printing should be done on white A4 paper, with printing on only one side of the paper. (It is suggested that the Tender documentation is not stapled, or punched for filing, prior to scanning, as this could affect the scanning process.)

After completion and signature (using **BLACK INK**), the entire Tender document is to be scanned to a single PDF (**P**ortable **D**ocument **F**ormat) document, at a resolution of 300 DPI (dots per inch). The PDF document is to be uploaded via the (Tender specific) upload option on the JDE System (SSS Module).

- Tenderers must ensure that the hard copy and electronic submission are the same, failing which the submission will be deemed invalid.
- Tenderers are responsible for resolving all access rights and submission queries on the JDE System before the tender closing date/ time (**Tender Data: C.2.15**).

Tender Offer delivery, and the electronic submission on the JDE System, are both to be completed on or before the closing date/ time stated in the **Tender Data: C.2.15**.

The submission of Tender Offers via any means other than that stated above will not be accepted, and those that are will be deemed invalid.

C.2.15 Closing date and time:

The closing time is:

- **Date : Friday, 15 August 2025**
- **Time : 11h00**

The **delivery of the hard copy AND** the completion of the requirements on the **JDE System (SSS Module)** are to be completed prior to the Tender **closing date and time** as stated above. Any Tender Offer submitted thereafter will not be considered.

C.2.16 Tender offer validity:

The Tender Offer validity period is **120 Days** from the closing date for submission of tenders.

C.2.23 Certificates:

Refer to **T2.1: “List of Returnable Documents”** 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 a printout of the required documents/ certificates at the back of their tender submission.

SARS Tax Compliance Status – PIN Issued

Reference is to be made to **Returnable Document T2.2.1: Compulsory Enterprise Questionnaire**.

B-BBEE Status Level of Contribution Certificate

Tenderers are referred to **Returnable Document T2.2.6: MBD 6.1: Preference Points Claim** for the B-BBEE Certificate requirements.

Central Supplier Database (CSD)

Reference is to be made to **Returnable Document T2.2.12: CSD Registration Report**.

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

The date of the report, as indicated at the top right of each page, should be on or after the date of advertising of this tender.

Separate **CSD Registration Reports** are required for each party to a Joint Venture.

CIDB Registration (if applicable)

Reference is to be made to **Returnable Document T2.2.13: 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://portal.cidb.org.za/RegisterOfContractors/>).

The date of obtaining the CIDB printout(s) is to be indicated on the printout, and the Tenderer's registration with the CIDB must be reflected as "Active" as at the date of tender closing.

Separate **CIDB Registration printouts** are required for each party to a Joint Venture.

The **Joint Venture Grading Designation Calculator** printout should be included when making a submission as a Joint Venture:

(<https://registers.cidb.org.za/PublicContractors/JVGradingDesignationCalc>)

C.3: THE EMPLOYER'S UNDERTAKINGS**C.3.1.1 Respond to requests from the tenderer:**

Replace the words "five working days" with "three working days".

C.3.2 Issue addenda:

Add the following paragraph:

"Addenda will be published on the **eThekweni Municipality Website** (refer to **Tender Data: C.1.2**).

C.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.

The tender opening schedule will also be made available on the eThekweni Municipal website at URL: <https://www.durban.gov.za/pages/business/publication-of-received-bids>

C.3.9 Arithmetical errors, omissions and discrepancies:

Add the following Clause:

"C.3.9.5 Reject a tender offer if the Tenderer does not accept the correction of the arithmetical error in the manner described in C.3.9.4."

C.3.11 Evaluation of Tender Offers:

Eligibility

Tenders will be checked for compliance with the ELIGIBILITY requirements, as specified in the **Tender Data: C.2.1**. Tenders not in compliance will be deemed non-responsive.

Preference Point System

The procedure for the evaluation of responsive tenders is **PRICE AND PREFERENCE**, in accordance with the Employer's **SCM Policy: Section 52: Preferential Procurement**.

The provisions of the SCM Policy: **Section 52.7: The Basket of Preference Goals** shall apply.

Price Points

The **80/20** preference points system, for requirements with a Rand value of up to R50,000,000 (all applicable taxes included), will be applied. The Formula used to calculate the **Price Points (max. 80)** will be according to that specified below.

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

80/20 Procurement System

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

Where:

P_s	=	Points scored for comparative price of bid under consideration
P_t	=	Comparative price of bid under consideration
P_{\min}	=	Comparative price of lowest acceptable bid

Preference Points

Reference is to be made to **Returnable Form: T2.2.6: MBD 6.1: Preference Points Claim**.

The Basket of Preference Goals (SCM Policy Section 52.7)

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

- **Ownership Goal**

Goal Weighting: 100%

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 Categories	Criteria	80/20
Race: Black (w1)	Equals 0%	0
	Between 0% and 51%	6
	Greater or equal to 51% and less than 100%	12
	Equals 100%	15
Gender: Female (w2)	Equals 0%	0
	Between 0% and 51%	2
	Greater or equal to 51% and less than 100%	4
	Equals 100%	5

Maximum Ownership Goal Points: **20**

The **Weightings** of the **Ownership Categories** will be:

- w1 = 75%, w2=25% (where: w1 + w2 = 100%)

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

- 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.

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

C.3.13 Acceptance of tender offer:

In addition to the requirements of **Tender Data: C.3.13** of the **Standard Conditions of Tender**, tender offers will only be accepted if:

- The Tenderer's municipal rates and taxes are not in arrears, or they have made arrangements to meet outstanding municipal fee obligations.
- The Tenderer's tax compliance status has been verified, or they have made arrangements to meet outstanding tax obligations.
- If applicable, the Tenderer is **registered**, and **"Active"**, with the **Construction Industry Development Board** in an appropriate contractor grading designation.
- The Tenderer or any of its directors/ shareholders are **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 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.

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

C.3.15 Complete adjudicator's contract:

Refer to the Conditions of Contract and the Contract Data.

C.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 referred to the requirements as stated in the **Tender Data: C.2.13**.

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:

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

PART T2: RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

T2.1.1 General

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

The Tenderer is required to complete and sign 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

T2.2.1	Compulsory Enterprise Questionnaire	27
T2.2.2	Certificate of Attendance at Clarification Meeting/ Site Inspection	28
T2.2.3	MBD 4: Declaration of Interest	29
T2.2.4	MBD 5: Declaration for Procurement Above R10 Million (if applicable)	31
T2.2.5	Contracts Awarded by Organs of State in the past 5 years	32
T2.2.6	MBD 6.1: Preference Points Claim Form (SCM Policy Section 52.7).....	33
T2.2.7	MBD 6.2: Declaration for Local Production and Content (if applicable).....	35
T2.2.8	MBD 8: Declaration of Bidder's Past SCM Practices	39
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T2.2.13	CIDB Registration and Status	47
T2.2.14	Joint Venture Agreements (if applicable)	48
T2.2.15	Record of Addenda to Tender Documents.....	49
T2.2.16	Experience of Tenderer.....	50

Contract Part: The Tenderer is required to complete following forms:

C1.1.1	Form of Offer	57
C1.2.2.2	Data to be Provided by Contractor	60
C2.2	Bill of Quantities	68

T2.2.1 COMPULSORY ENTERPRISE QUESTIONNAIRE

Ref	Description	Tenderer to Complete	
1.1	Name of enterprise		
1.2	Name of enterprise's representative		
1.3	Email address of representative		
1.4	Contact numbers of representative	Tel:	Cell:
1.5	National Treasury Central Supplier Database Registration number	MAAA	
1.6	VAT registration number, if any:		
1.7	CIDB registration number, if any:		
1.8	Department of Labour: Registration number		
1.9	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			

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	MBD 4, MBD 6, MBD 8, and MBD9 issued by National Treasury <u>must be completed for each tender and be included as a tender requirement.</u>
-----	--

Tenderers are to include, at the back of their tender submission, a printout of their SARS "Tax Compliance Status – PIN Issued" certificate.

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 Tenderer's 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 the **Tender Data: C.2.1.1(a) and C.2.7.**

This is to certify that:

(entity name):

of (address):

was represented by the person(s) named below at the Clarification Meeting for Contract **3R-31547** held for all Tenderers, the details of which are stated in the **Tender Data: C.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 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

Name of enterprise’s representative

3.2 ID Number of enterprise’s representative

3.3 Position enterprise’s representative occupies in the enterprise

3.4 Company Registration number

3.5 Tax Reference number

3.6 VAT registration number

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.

3.8 Are you presently in the service of the state?

Circle Applicable

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:

**T2.2.4 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	
		YES	NO
1.0	Are you by law required to prepare annual financial statements for auditing?		
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. SEE Returnable Document T2.2.5		
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, 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:

T2.2.5 CONTRACTS AWARDED BY ORGANS OF STATE IN THE PAST 5 YEARS

In terms of SCM Policy Section 20(1)(d)(iii), Tenderers are to provide details of Works undertaken for the Government or Public Sector entities/ Organs of State in the past 5 Years, including particulars of any material non-compliance or dispute concerning the execution of such contract.

Material non-compliance or dispute (Yes or No)													
Date Completed													
Value of Work													
Consulting Engineer/Engineers representative													
Employer													
Contract Number													

I, the undersigned, who warrants that they are authorised to sign on behalf of the entity, 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 6.1: PREFERENCE POINTS CLAIM

(SCMP 52.7: Basket of Preference Goals)

This form serves as a claim form for preference points according to **The Basket of Preference Goals. Reference is to be made to the Tender Data: C.3.11.**

1.0 GENERAL CONDITIONS

- 1.1 The relevant **Preference Points System (80/20 or 90/10)** applicable to this bid is stated in the **Tender Data: C.3.11.**
- 1.2 Failure on the part of the Tenderer to submit the required proof or documentation, in terms of the requirements in the Tender Data for claiming specific goal preference points, will be interpreted that **Preference Points for Specific Goals** are not claimed.
- 1.3 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2.0 ADJUDICATION USING A POINT SYSTEM

- 2.1 The bidder obtaining the highest number of total points will be recommended for the award of the contract.
- 2.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.
- 2.3 Points scored will be rounded off to the nearest 2 decimal places.
- 2.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.
- 2.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.
- 2.6 Should two or more bids be equal in all respects the award shall be decided by the drawing of lots.

3.0 POINTS AWARDED FOR PRICE

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

80/20 Procurement System

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

Where:

P_s	=	Points scored for comparative price of bid under consideration
P_t	=	Comparative price of bid under consideration
P_{\min}	=	Comparative price of lowest acceptable bid

4.0 POINTS ALLOCATED FOR THE BASKET OF PREFERENCE GOALS

4.1 Preference points may be claimed for the **Specific Goals** stated in the **Tender Data: C.3.11**.

For the purposes of this tender, the Tenderer may claim points based on the goal(s) stated in the table below, as supported by proof/ documentation specified in the Tender Data.

80/20 Preference Points System The Specific Goals to be allocated points in terms of this tender:	Maximum Number of points ALLOCATED	Tenderer's Number of points CLAIMED
Ownership Goal: Race (black)	15	
Ownership Goal: Gender (female)	5	
Total CLAIMED Points (maximum 20)	20	

5.0 REMEDIES FOR THE SUBMISSION OF FALSE INFORMATION

5.1 The remedies for the submission of false information regarding claims for specific goals are stated in the **SCM Policy: Section 52.9**.

Tenderers are to include, at the back of their tender submission, the required proof/ documentation in support of their Preference Goal claims.

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 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS

This Municipal Bidding Document (MBD 6.2) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

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

1.0 GENERAL CONDITIONS

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

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

Where: x is the imported content in Rand
 y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) on the date of advertisement of the bid as indicated in paragraph 3.1 below.

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

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

2.0 THE STIPULATED MINIMUM THRESHOLD(S)

The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:

Description of services, works or goods

Stipulated Minimum Threshold

NO DESIGNATED SECTORS APPLIED

N/A

3. Does any portion of the goods or services offered have any imported content?

YES ☐ NO ☒ (Tick applicable box)

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

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

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

Currency	Rates of Exchange
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

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

4. CHALLENGES IN MEETING THE STIPULATED MINIMUM THRESHOLD

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

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

IN RESPECT OF BID NO. 3R-31547

ISSUED BY: (Procurement Authority / Name of Institution): ETHEKWINI MUNICIPALITY

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

I, the undersigned, (full names),

do hereby declare, in my capacity as

of(name of bidder entity), the following:

- a) The facts contained herein are within my own personal knowledge.
- b) I have satisfied myself that the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 2 above)	%
Local content %, as calculated in terms of SATS 1286:2011	%

If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above.

The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 3.1 above and the information contained in Declaration D and E.

- (a) I accept that the Procurement Authority/ Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (b) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority/ Institution imposing any or all of the remedies as provided for in the Policy.

SIGNATURE: _____ **DATE:** _____

WITNESS No. 1 _____ **DATE:** _____

WITNESS No. 2 _____ **DATE:** _____

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:
- abused the municipal entity's supply chain management system or committed any improper conduct in relation to such system.
 - been convicted for fraud or corruption during the past five years.
 - wilfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years.
 - 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 **bids**¹ 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 below **Certificate of Independent Bid Determination** must be completed and submitted with the bid.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid for: Contract **3R-31547**
WORK PACKAGE 1 for TRK 83662 in SENZOKUHLE AREA, WARD 3

in response to the invitation for the bid made by: ETHEKWINI MUNICIPALITY

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

I certify, on behalf of:

that:

(continued on next page)

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 DECLARATION OF MUNICIPAL FEES

Reference is to be made to the **Tender Data: C.2.23 and C.3.13(a)**.

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: to be completed by Tenderer</u>											
Consolidated Account												
Electricity												
Water												
Rates												
JSB Levies												
Other												

- If applicable, a copy of a recent (within the past 3 months) Metro Bill is to be provided.

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.
- Where a Tenderer's place of business or business interests are carried out from premises as part of any other 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, copies of the above-mentioned account's, agreements signed with the municipality, lease agreements, or official letters.

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:

T2.2.11 CONTRACTOR'S HEALTH AND SAFETY DECLARATION

Reference is to be made to Clauses C.2.1(e) and C.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:

.....

.....

T2.2.12 CSD REGISTRATION REPORT

Reference is to be made to **Tender Data: C.2.1.1(b) and C.2.23**.

The **Tender Data: C.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.

The date of obtaining the printout is to be printed on the printout.

CSD Registration Reports can be obtained from the National Treasury's CSD website at <https://secure.csd.gov.za/Account/Login>.

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

Note: the printout will contain more than one page.

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

Tenderers are to include, at the back of their tender submission, a printout of their 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: _____

T2.2.13 CIDB REGISTRATION AND STATUS

Reference is to be made to the **Tender Data: C.2.1.2, C.2.23, and C.3.13(c).**

The **Tender Data: C.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 the **Tender Data: C.2.1.2.**

The date of obtaining the printout is to be printed on the printout.

CIDB Registrations can be obtained from the CIDB website at:

<https://portal.cidb.org.za/RegisterOfContractors/>

The following is an example of the printout obtained from the above website using the provided “Print” button. Note: the printout may contain more than one page.

Tenderers are to include, at the back of their tender submission, a printout of their CIDB Registration and Status.

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 JOINT VENTURES AGREEMENTS

If this tender submission is to be made by an established Joint Venture, the Joint Venture Agreements and Power of Attorney Agreements are to be attached here.

Should the Joint Venture, at the time of submission, not yet be formalised, this form is to be completed in full and signed by all parties to the proposed Joint Venture.

The Lead Partner of the Joint Venture is to sign the **Form of Offer** in Section **C1.1.1**.

INTENT TO FORM A JOINT VENTURE

Should our submission for CONTRACT: **3R-31547** be successful, a Joint Venture will be established by the parties as listed below, as an unincorporated association, with the purposes of securing and executing the Contract, for the benefit of the Members.

Proposed Joint Venture

Joint Venture Title (name):

Represented by (name):

Tel:

Lead Partner/ Member 1

Entity Name:

Ownership Interest in JV %:

CSD Registration:

CIDB #:

Represented by (name):

Signature:

Partner/ Member 2

Entity Name:

Ownership Interest in JV %:

CSD Registration:

CIDB #:

Represented by (name):

Signature:

Partner/ Member 3

Entity Name:

Ownership Interest in JV %:

CSD Registration:

CIDB #:

Represented by (name):

Signature:

Note: All requirements for Joint Ventures, as stated elsewhere in this procurement document, must be complied with in full.

T2.2.15 RECORD OF ADDENDA TO TENDER DOCUMENTS

Reference is to be made to the **Tender Data: C.2.6.**

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: _____

T2.2.16 ELIGIBILITY: EXPERIENCE OF TENDERER

Reference is to be made to the **Tender Data: C.2.1.3**.

Only those Tenderers that can demonstrate experience and submit the associated documentation/ information, in works of a similar nature, within the past 10 years, will be eligible to have their tenders evaluated in terms of **Tender Data: C.3.11**.

- The **Eligibility Criteria Requirement** is as stated on **Table 1: “Experience Requirement”**.
- The experience is to be “**Similar in Nature**” to that specified on **Table 2: “Works of a Similar Nature”**. Tenderers are to note the exclusions (if any) stated on this table.
- The **Documentation/ Information** that is required is specified on **Table 3: “Documentation/ Information Requirements”** (which includes the Notes below the table).
- Tenderers may submit experience gained as **Sub-Contractors or Main Contractors**.

It is the responsibility of the Tenderer to ensure that the experience submissions comply with the requirements as stated in the Tender Data: C.2.1.3.

Guidance to Tenderers: Experience Submission Form**Client / Employer Details**

- Provide details for whom the works were carried out (works owner).
- Provide **Contact details of the Client or Main Contractor** (if experience was gained as a sub-contractor) is required to be provided.

The contact details may be used by the Employer to verify the information, pertaining to the experience submission. Should the Employer’s reasonable attempts to make contact with the Client or Main Contractor fail (for whatever reason), that specific experience submission may be considered invalid.

Contract Details

- Provide the **Contract Reference Number** and **Contract Title**.
- Indicate if this contract has been completed or is still in progress.
- Provide **Contract Dates**.
- Provide **Contract Values** - Where works are still in progress, provide the value of works that have been completed as detailed on the most recent payment to the Contractor / Sub-Contractor. If the works are complete, provide the Final Value of the sub-contract or Final Contract Price.

Scope of Works

- Indicate the **Works Type(s)** that best describe the works included in the project.
Select the most applicable option (only 1).
- Indicate the **Works Elements(s)** that were included in the project.
Select any elements that were included in the contract.

Joint Ventures

In the event of a Joint Venture (JV) tendering for this contract, experience gained by the separate entities making up the JV may be used as experience, provided that the experience complies with the requirements, as stipulated in **Table 1**, and that the required documentation/ information is provided.

(T2.2.16 is continued on the next page)

Confirmation of submission of Information/ Documentation

The Tenderer is to indicate (by marking with an "X" in the shaded column) the documentation that has been included in this tender submission, in support of each experience submission.

		If submitted, mark with an "X"
SUBMISSION #1	Experience Submission Form (completed and signed)	
	Proof of Sub-Contract Agreement (if experience was gained as a sub-contractor)	
	Letter of Award OR Form of Offer & Acceptance	
	Most recent Payment Certificate (with Quantities summary), OR most recent INVOICE (with Quantities summary)	
	Final Payment Certificate (with Quantities summary), OR most recent INVOICE (with Quantities summary)	
	Completion Certificate	
SUBMISSION #2	Experience Submission Form (completed and signed)	
	Proof of Sub-Contract Agreement (if experience was gained as a sub-contractor)	
	Letter of Award OR Form of Offer & Acceptance	
	Most recent Payment Certificate (with Quantities summary), OR most recent INVOICE (with Quantities summary)	
	Final Payment Certificate (with Quantities summary), OR most recent INVOICE (with Quantities summary)	
	Completion Certificate	
SUBMISSION #3	Experience Submission Form (completed and signed)	
	Proof of Sub-Contract Agreement (if experience was gained as a sub-contractor)	
	Letter of Award OR Form of Offer & Acceptance	
	Most recent Payment Certificate (with Quantities summary), OR most recent INVOICE (with Quantities summary)	
	Final Payment Certificate (with Quantities summary), OR most recent INVOICE (with Quantities summary)	
	Completion Certificate	

Note: Should there be insufficient evidence for verification of the information submitted for any specific experience submission, that experience submission **WILL** be deemed invalid.

*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: _____

EXPERIENCE SUBMISSION #1Reference is to be made to the **Tender Data: C.2.1.3.**

(Where required, in the shaded areas, clearly mark selection with an "X" or circle applicable)

Experience as a:	Sub-Contractor:		Main Contractor:	
-------------------------	------------------------	--	-------------------------	--

Client/ Employer OR Main Contractor's Details Should the Employer's reasonable attempts to make contact, to verify the information provided, fail (for whatever reason) this experience submission WILL be considered invalid.	Entity Name:														
	Contact Name:														
	Contact Tel:					-					-				
	Contact Cell:					-					-				
	Contact email / other:														
Enter the Client/ Employer's details, OR, if the works was done as a sub-contractor, enter the Main Contractor's Details															

Contract Details	Contract (Reference) Number:																			
	Contract Title:																			
	Has this Contract been completed?	Y	N	Commencement Date:	d	d	m	m	2	0	y	y	Completion Date (if applicable):	d	d	m	m	2	0	y
Tendered Value (Contract Sum) OR Sub-Contract Value:	R	Final Contract Price OR Final Value of Sub-Contract:				R														

Contract Scope-of-Work (Type of Project and Works Elements):

Which Works Type(s) best describe the project?		new road construction		
road widening/upgrades		intersection improvements		
gravel to surfaced road upgrades		access road upgrades		
major parking areas		interim roadways to informal settlements		
OTHER: provide a description of the type of project				

Which Works Element(s) were included in the project?		bulk earthworks		
roadway layer-works		asphalt roadway surfacing		
kerbing/ channelling		sidewalk/ walkway construction		
traffic calming measures		stormwater drainage		
retaining structures		dealing with underground services		
OTHER: List works elements included in project				

Confirmation of documentation submitted is to be recorded on Page 51.

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:**

EXPERIENCE SUBMISSION #2Reference is to be made to **Tender Data: C.2.1.3.**

(Where required, in the shaded areas, clearly mark selection with an "X" or circle applicable)

Experience as a:	Sub-Contractor:		Main Contractor:	
-------------------------	------------------------	--	-------------------------	--

Client/ Employer OR Main Contractor's Details Should the Employer's reasonable attempts to make contact, to verify the information provided, fail (for whatever reason) this experience submission WILL be considered invalid.	Entity Name:														
	Contact Name:														
	Contact Tel:					-					-				
	Contact Cell:					-					-				
	Contact email / other:														
Enter the Client/ Employer's details, OR, if the works was done as a sub-contractor, enter the Main Contractor's Details															

Contract Details	Contract (Reference) Number:																			
	Contract Title:																			
	Has this Contract been completed?	Y	N	Commencement Date:	d	d	m	m	2	0	y	y	Completion Date (if applicable):	d	d	m	m	2	0	y
Tendered Value (Contract Sum) OR Sub-Contract Value:	R	Final Contract Price OR Final Value of Sub-Contract:				R														

Contract Scope-of-Work (Type of Project and Works Elements):

Which Works Type(s) best describe the project?		Pedestrian Bridge	
Stormwater related structure (culverts etc)		Road Bridge and related structures	
Retaining structures		Maintenance and repairs to structures	
OTHER: provide a description of the type of project			

Which Works Element(s) were included in the project?		Reinforced concrete construction.	
Retaining walls (reinforced concrete, masonry, gabion, proprietary block systems etc).		Reinforced concrete repairs (spalling, member replacement, use of specialist products etc).	
Reinforced and prestressed concrete pedestrian and road bridges.		Specialist proprietary product repair systems or approved product applicator for specific specialist proprietary products.	
Reinforced concrete pedestrian bridges.		Structural steel construction and repairs and application of steel protection systems.	
Structural steel pedestrian bridges.			
OTHER: List works elements included in project			

Confirmation of documentation submitted is to be recorded on Page 51.

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:**

EXPERIENCE SUBMISSION #3Reference is to be made to **Tender Data: C.2.1.3.**

(Where required, in the shaded areas, clearly mark selection with an "X" or circle applicable)

Experience as a:	Sub-Contractor:		Main Contractor:	
-------------------------	------------------------	--	-------------------------	--

Client/ Employer OR Main Contractor's Details Should the Employer's reasonable attempts to make contact, to verify the information provided, fail (for whatever reason) this experience submission WILL be considered invalid.	Entity Name:														
	Contact Name:														
	Contact Tel:					-					-				
	Contact Cell:					-					-				
	Contact email / other:														
Enter the Client/ Employer's details, OR, if the works was done as a sub-contractor, enter the Main Contractor's Details															

Contract Details	Contract (Reference) Number:														
	Contract Title:														
	Has this Contract been completed?	Y	N	Commencement Date:		d	d	m	m	2	0	y	y		
				Completion Date (if applicable):		d	d	m	m	2	0	y	y		
Tendered Value (Contract Sum) OR Sub-Contract Value:		R	Final Contract Price OR Final Value of Sub-Contract:		R										

Contract Scope-of-Work (Type of Project and Works Elements):

Which Works Type(s) best describe the project?		Pedestrian Bridge	
Stormwater related structure (culverts etc)		Road Bridge and related structures	
Retaining structures		Maintenance and repairs to structures	
OTHER: provide a description of the type of project			

Which Works Element(s) were included in the project?		Reinforced concrete construction.	
Retaining walls (reinforced concrete, masonry, gabion, proprietary block systems etc).		Reinforced concrete repairs (spalling, member replacement, use of specialist products etc).	
Reinforced and prestressed concrete pedestrian and road bridges.		Specialist proprietary product repair systems or approved product applicator for specific specialist proprietary products.	
Reinforced concrete pedestrian bridges.		Structural steel construction and repairs and application of steel protection systems.	
Structural steel pedestrian bridges.			
OTHER: List works elements included in project			

Confirmation of documentation submitted is to be recorded on Page 51.

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:**

EXPERIENCE SUBMISSION #4Reference is to be made to **Tender Data: C.2.1.3.**

(Where required, in the shaded areas, clearly mark selection with an "X" or circle applicable)

Experience as a:	Sub-Contractor:		Main Contractor:	
-------------------------	------------------------	--	-------------------------	--

Client/ Employer OR Main Contractor's Details Should the Employer's reasonable attempts to make contact, to verify the information provided, fail (for whatever reason) this experience submission WILL be considered invalid.	Entity Name:														
	Contact Name:														
	Contact Tel:					-					-				
	Contact Cell:					-					-				
	Contact email / other:														
Enter the Client/ Employer's details, OR, if the works was done as a sub-contractor, enter the Main Contractor's Details															

Contract Details	Contract (Reference) Number:														
	Contract Title:														
	Has this Contract been completed?	Y	N	Commencement Date:		d	d	m	m	2	0	y	y		
				Completion Date (if applicable):		d	d	m	m	2	0	y	y		
Tendered Value (Contract Sum) OR Sub-Contract Value:		R	Final Contract Price OR Final Value of Sub-Contract:		R										

Contract Scope-of-Work (Type of Project and Works Elements):

Which Works Type(s) best describe the project?		Pedestrian Bridge	
Stormwater related structure (culverts etc)		Road Bridge and related structures	
Retaining structures		Maintenance and repairs to structures	
OTHER: provide a description of the type of project			

Which Works Element(s) were included in the project?		Reinforced concrete construction.	
Retaining walls (reinforced concrete, masonry, gabion, proprietary block systems etc).		Reinforced concrete repairs (spalling, member replacement, use of specialist products etc).	
Reinforced and prestressed concrete pedestrian and road bridges.		Specialist proprietary product repair systems or approved product applicator for specific specialist proprietary products.	
Reinforced concrete pedestrian bridges.		Structural steel construction and repairs and application of steel protection systems.	
Structural steel pedestrian bridges.			
OTHER: List works elements included in project			

Confirmation of documentation submitted is to be recorded on Page 51.

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: _____

EXPERIENCE SUBMISSION #5Reference is to be made to **Tender Data: C.2.1.3.**

(Where required, in the shaded areas, clearly mark selection with an "X" or circle applicable)

Experience as a:	Sub-Contractor:		Main Contractor:	
-------------------------	------------------------	--	-------------------------	--

Client/ Employer OR Main Contractor's Details Should the Employer's reasonable attempts to make contact, to verify the information provided, fail (for whatever reason) this experience submission WILL be considered invalid.	Entity Name:														
	Contact Name:														
	Contact Tel:					-					-				
	Contact Cell:					-					-				
	Contact email / other:														
Enter the Client/ Employer's details, OR, if the works was done as a sub-contractor, enter the Main Contractor's Details															

Contract Details	Contract (Reference) Number:																			
	Contract Title:																			
	Has this Contract been completed?	Y	N	Commencement Date:	d	d	m	m	2	0	y	y	Completion Date (if applicable):	d	d	m	m	2	0	y
Tendered Value (Contract Sum) OR Sub-Contract Value:	R	Final Contract Price OR Final Value of Sub-Contract:				R														

Contract Scope-of-Work (Type of Project and Works Elements):

Which Works Type(s) best describe the project?		Pedestrian Bridge	
Stormwater related structure (culverts etc)		Road Bridge and related structures	
Retaining structures		Maintenance and repairs to structures	
OTHER: provide a description of the type of project			

Which Works Element(s) were included in the project?		Reinforced concrete construction.	
Retaining walls (reinforced concrete, masonry, gabion, proprietary block systems etc).		Reinforced concrete repairs (spalling, member replacement, use of specialist products etc).	
Reinforced and prestressed concrete pedestrian and road bridges.		Specialist proprietary product repair systems or approved product applicator for specific specialist proprietary products.	
Reinforced concrete pedestrian bridges.		Structural steel construction and repairs and application of steel protection systems.	
Structural steel pedestrian bridges.			
OTHER: List works elements included in project			

Confirmation of documentation submitted is to be recorded on Page 51.

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: _____

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: **3R-31547**

Contract Title: **WORK PACKAGE 1 for TRK 83662 in SENZOKUHLE AREA, WARD 3**

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 fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this Agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five 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**.

1.1.1.14 The whole of the Works shall be completed within **36 Weeks**. 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.

The Works are to be completed in portions as set out in the Scope of Work. The time for achieving Practical Completion of the portions is as follows:

- 1) For portion 1: **18 weeks**
- 2) For portion 2: **18 weeks**

1.1.1.15 The Employer is the eThekweni Municipality as represented by: Sandile Masondo
Deputy Head: **Roads Provision**

1.2.1.2 The address of the Employer is:
Physical: Engineering Unit, 166 K.E. Masinga Road, DURBAN, 4001
Postal: Engineering Unit, P O Box 680, DURBAN, 4000
Telephone: 031-322 2879
E-Mail: sandile.masondo@durban.gov.za

1.1.1.16 The **name of the Employer's Agent** is Sandile Khulu

1.2.1.2 The address of the Employer's Agent is:
Physical: Engineering Unit, 166 K.E. Masinga Road, DURBAN, 4001
Postal: Engineering Unit, P O Box 680, DURBAN, 4000
Telephone: 031-311 7628
E-Mail: sandile.khulu@durban.gov.za

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

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

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

- 4.11.1 To carry out and complete the works, the Contractor shall employ a competent Site Agent and Foreman as part of the key staff. It is a requirement for the Contractor's Site Agent and Foreman to each have a minimum of 3 years relevant experience including experience on projects of a similar nature. The CV's of the Site Agent and the Foreman should be submitted to the Employer's Agent's Representative for acceptance by the Department (reference is made to Cl.5.3.1 of the Contract Data).

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)
- Sub-contracting Implementation Plan
- If required to be registered, in terms of the Occupational Injuries and Diseases Act (130 of 1993 as amended), the Contractor 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. Should the Contractor's Letter of Good Standing be expired, but an application for renewal has been made, the Contractor is to submit the expired Letter of Good Standing AND proof of an application for renewal.

- 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."

- 5.8.1 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 2 500** (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, **Plant, Materials, and Fuel** shall be based on **2023 = 100**.
- The Index for **Labour** shall be based on **2024 = 100**.

- “L” is the “Labour Index”
- “P” is the “Contractor’s Equipment Index”
- “M” is the “Materials Index”
- “F” is the “Fuel Index”

STATS SA Statistical Release	Table	Description	Coefficient
P0141	Table A	Geographic Indices; CPI per Province; Kwa-Zulu Natal	a = 0.28
P0151.1	Table 4	Plant and Equipment	b = 0.28
P0151.1	Table 6	Civil Engineering Material (excluding bitumen)	c = 0.38
P0142.1	Table 1	Coke, petroleum, chemical, rubber and plastic products; Coal and petroleum products; Diesel	d = 0.06

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

Bitumen - escalation will be calculated using the “Rise and Fall” method as determined by the Employer. The base price for bitumen on this contract shall be the ruling price of 50/70 grade bitumen based on the **RUBIS Asphalt South Africa List Selling Price** for Penetration Grade Bitumen, seven (7) days prior to the closing date of tenders.

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

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

6.10.3 **Retention Money:** Delete the word “selected”.

The percentage retention on the amounts due to the Contractor is 10%.

The limit of “retention money” is 5% of the Contract Sum.

Should the Contract Price exceed the Contract Sum then the limit of “retention money” is 5% of the Contract Price.

Interest will not be paid on retention withheld by the Employer.

8.6.1.1.2 The **value of Plant and materials** supplied by the Employer to be included in the insurance sum: **Not Required**.

8.6.1.1.3 The **amount to cover professional fees** for repairing damage and loss to be included in the insurance sum: **Not Required**.

8.6.1.2 **SASRIA Coupon Policy** for Special Risks to be issued in joint names of Council and Contractor for the full value of the works (including VAT).

8.6.1.3 The limit of indemnity for **liability insurance**: **R 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 1 000 000,00**.
- Maximum first excess: **R 20 000,00**.

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 2 000 000,00**.
- Consequential loss to be covered by policy: **Yes**
- Liability section of policy to be extended to cover blasting: **Nil**.
- Maximum excess per claim or series of claims arising out of any one occurrence: **R20 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: **R1 000 000,00**.
- 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 Ward 3**. 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 SUB-CONTRACTING

It is a condition of contract that the contractor must allow for a minimum of **30%** of the contract value (excluding PC Sum items and Fixed Cost allowances) to be subcontracted to contractors who are **>51%** owned by Black People. Proof of payment to the subcontractors will be required to verify that the minimum has been achieved.

The penalty for not achieving the specified sub-contracting will be 0.5% of the contract value (excluding PC Sum items and Fixed Cost allowances) for every 1% of sub-contracting 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 C.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 18 pages. The pages are numbered

- BoQ 1 to BoQ 16 and
- Summary of BoQ 1 to 2

PART C3: SCOPE OF WORK

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C3.1: PROJECT DESCRIPTION AND SCOPE OF CONTRACT

C3.1.1 Description of Works

The works will be undertaken in the Senzokuhle Area in Ward 03, Mzinyathi. The project entails the supply of all plant, labour and material necessary for the upgrade of approximately 400m of TRK 83662 with associated stormwater drainage and establishment of portal culvert.

The Employer's objective is to deliver the necessary public infrastructure using labour intensive methods for labour intensive works.

The scope of works comprises the following:

Site Clearance

1. General Clearance of the area of works

Concrete Works

1. Construction of concrete v-drains (1m wide x 0.2m deep along the road)
2. Concrete slabs for driveways
3. Construction of portal culvert

Earthworks and Layerworks

1. Cut to fill, cut to spoil & importing of suitable fill.
2. Road formation
3. Layerworks consisting of 150mm subbase G5 & 150mm base G2 material.

Stormwater Drainage

1. Construction of new concrete stormwater pipes and headwalls
2. Install precast portal culvert

Asphalt Roadwork

1. Construction of a 5.0m wide road using a 40mm AC – Sa-S10

Protection Works

1. Reno mattress
2. Gabion boxes
3. Geolok or similar approved retaining wall

Services

1. Proving of existing services

C3.1.2 Description of Site and Access

The site is located in Ward 3 of the eThekweni Municipality, within the Senzokuhle Area of Durban.

C3.1.3 Nature of Ground and Subsoil Conditions

There is no specific information regarding the nature of the ground and subsoil conditions available. Detailed assessments will be carried out on site by an external independent accredited SANAS Soil Laboratory.

C3.1.4 CIDB B.U.I.L.D. Programme (Employer's objectives)**Standard for Indirect Targeting for Enterprise Development**

It will be a Condition of Contract that the Contractor shall, in the performance of the contract, achieve the **Contract Participation Goal (CPG)** relating to the engagement of targeted enterprises as established in the below referenced standard:

- CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, published in Gazette Notice No. 36190 of 25 February 2013.
- a) The objective of the project is to provide for a minimum contract participation goal (CPG) of 5% of the total project value and to develop targeted enterprises by the main or lead partner contractors.
- b) The successful contractor shall:
1. Subcontract a minimum of 5% of the total project value to targeted enterprises;
 2. Develop the targeted enterprise/s in two development areas as specified in the Standard, and agreed by both the main contractor and the targeted enterprise/s;
 3. Perform needs analysis on the targeted enterprise to identify developmental goals;
 4. Provide internal mentorship support to improve the targeted enterprise/s performance;
 5. Develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas;
 6. Monitor and report the progress of the agreed development areas with the targeted enterprise/s; and
 7. Submit a project completion report to the Employer's representative for each targeted enterprise.
- c) The development of the Targeted Enterprise shall be guided by the **CIDB Competence Standard for Contractors** (Gazette No. 41237, 10 November 2017). Table 2. below outlines the minimum recognised qualifications to which development of targeted enterprises must be undertaken by the main contractor.

CIDB Grade	Minimum NQF Level	Recognised Qualifications
Business Management		
5 & 6	5	<ul style="list-style-type: none"> National Occupational Qualification in Business Management NQF 5
2 to 4	2	<ul style="list-style-type: none"> National Certificate: Construction Contracting NQF 2
Building and Construction Works Management		
5 & 6	5	<ul style="list-style-type: none"> National Certificate: Management of Building Construction Processes NQF 5
2 to 4	3	<ul style="list-style-type: none"> NCV 4: Civil Engineering and Building Construction, or National Certificate: Supervision of Construction Processes
Civil Engineering Construction Works		
5 & 6	5	<ul style="list-style-type: none"> National Certificate: Management of Civil Engineering Processes NQF 5, or National Diploma: Civil Engineering and Building Diploma
2 to 4	3	<ul style="list-style-type: none"> NCV 4: Civil Engineering and Building Construction or National Certificate: Supervision of Construction Processes, or Further Education and Training Certificate: Supervision of Construction Processes

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 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) In general, at least two (2) weeks' notice is required by all the Municipal Departmental service organisations before the respective work teams can be deployed on site.
- (2) Should there be relocation of services required, the contractor shall allow and make time for delays in his programme.
- (3) Adequate time must be allowed for ordering of materials.

- (4) Vehicular and pedestrian access to private property is to be maintained at all times unless prior written permission to close the access has been obtained by the contractor, from the property owner / occupier, and approved by the Engineer.
- (5) Attention must be paid to the accommodation of pedestrians and traffic during the period of the contract. Adequately, safe pedestrian accommodation must be provided for the full duration of contract.
- (6) The contractor shall allow for all signs, barricades, delineators and temporary road markings under the applicable items in the Bill of Quantities
- (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 “SADC 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.

PS.2.2 Proving Underground Services

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

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

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

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

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

Should any service be damaged by the Contractor in carrying out the works and should it be found that the procedure as laid down in this clause has not been followed then all costs in connection with the repair of the service will be to the Contractor's account.

When electrical cables are not in the positions shown on drawings of 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;

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

PS.2.4 Accommodation of Services

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

PS.3 WATERMAINS

PS.3.1 General

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 Compaction 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

No works to sewer drainage is envisaged.

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

The existing stormwater system is to be upgraded where necessary. New stormwater concrete pipes and concrete v-drains will be constructed as indicated on the drawings. Manholes will also be raised / lowered where necessary.

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

No relocation of electricity poles / cables are envisaged however care needs to be taken when working within close proximity to the electricity cables / poles.

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 eThekweni 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 eThekweni Electricity throughout the contract.

PS.6.2 Street Lighting

No relocation of electricity poles / cables are envisaged however care needs to be taken when working within close proximity to the electricity cables / poles.

PS.6.3 MV / LV Cables

Certain MV / LV cables are to be replaced within the contract area. The actual cable work related to this relocation and/or replacement will be carried out by eThekweni Electricity. It is emphasized that the two-week period referred to in Clause PS.2 is the minimum duration needed to allow eThekweni Electricity to be on site promptly.

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

The tenderers attention is drawn to the fact that Telkom / Neotel copper cables and fibre optic cables are existing in the contract area. The exact position and depth of these services is not known as those service providers have not as yet provided this Department with the relevant records. Notwithstanding this, extreme care is to be exercised when working in the vicinity of these cables and proving of these services by hand excavation will be required before excavations for roadworks takes place.

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.9.4 Content of Environmental Management Programme (EMPr)

Where a government notice gazetted by the Minister provides for a generic EMPr, such generic EMPr as indicated in such notice will apply.

PS.9.5 Role of the environmental assessment practitioner (EAP)

Performing the environmental management requirements shall be by a qualified specialist practitioner, the EAP, as a subservice needed by the Employer. Assessment is given its meaning in terms of the National Environmental Management Act (NEMA) to collect, organise, analyse, interpret and communicate all information relating to the decision making needed during the project. In this document, only broad summaries are provided in terms of the studies required as it is expected that the EAP shall have a comprehensive understanding of EDTEA procedural requirements for each type of environmental approval or study, including any modifications made to them from time to time. The omission of any environmental procedures in the descriptions provided in this document does not in any way absolve the EAP from not completing required works as it is expected that the EAP is fully aware of all procedures and requirements.

A fundamental requirement for performance as a subservice is the demand for independence. The definition of independent given in the EIA regulations shall apply. A declaration that the EAP has no interest in the contract (other than a commercial one directly flowing from the subservice contract itself) shall be signed at contract commencement and at all subsequent times of environmental management input. Throughout the environmental application process the EAP must acquire the approval of the Employer (the Engineer). The giving of approval cannot be construed by the EAP that liability for his work passes to the Employer. Giving approval shall mean that the Employer has reviewed the EAP's work, engaged in discussion and provided comment, but ultimately, if any disagreement occurs, the EAP's independence and expertise shall prevail, and the records of the process note the disagreement. The

relationship between the EAP and the Employer is mirrored in the contract between the Employer and the Applicant.

PS.10 OCCUPATIONAL HEALTH AND SAFETY

PS.10.1 General Statement

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

1. The area of works is bounded by residential properties
2. The Works will require machinery and plant of varying sizes
3. The manual movement of heavy precast products will be required
4. The raw asphalt used will be delivered to site at high temperatures, which after processing, remains hot for some time.
5. The deviation of the traffic must be maintained throughout the day and night, weekends and public holidays included, and
6. All road signs must be maintained to allow for adequate sight distance by the road users

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 C3.4: Particular Specifications.

PS.10.2.2 Tenderer's Health and Safety Plan

At tender stage only a brief overview of the Tenderer's perception on the safety requirements for this contract will be adequate. This will be attached to 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 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.

The Contractor is to take note of the prevailing security rate in the rate area, together with the allowable PSIRA rates for security when pricing this item.

The process of negotiation will not be deemed as work stoppage.

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).

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

The following KPIs will be applicable to this contract:

- a) Contractor adherence to Health and safety
- b) Compliance with site induction requirements
- c) Adherence to quality and standards applicable
- d) Management of social and community issues
- e) Quality assurance & control (viz. Testing etc.) & implementation of stage gates.
- f) Adherence to programme
- g) Actual Length of Gravel to Surface Road Constructed
- h) Total FTE'S for this project

PS.13 CIDB BUILD PROGRAMME

a) CIDB Skills Standard

It will be a condition of contract that the Contractor shall, in the performance of the contract, achieve the **Contract Skills Development Goal** (CSDG) established in the below referenced standard:

- CIDB Standard for Developing Skills Through Infrastructure Contracts, published in Gazette Notice No. 48491 of 28 April 2023.

b) CIDB Indirect Targeting Standard

It will be a condition of contract that the Contractor shall, in the performance of the contract, achieve the **Contract Participation Goal** (CPG) relating to the engagement of targeted enterprises as established in the below referenced standard:

- CIDB Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, published in Gazette Notice No. 36190 of 25 February 2013.

PS.14 FTE (FULL TIME EQUIVALENT) EMPLOYMENT INFORMATION

Refer to the Contract Data Part C1.2.3.4

PS. 15 TESTING

Further to clause AB.6, the Contractor is to include in his unit rates for the cost of classification testing of all materials delivered to site intended for use in the layer works and for all density

control testing of all layer works as per the pavement design illustrated on the contract drawings.

The Contractor is to provide results of all control testing to the Employer's Agent's Representative, if satisfied the Employer's Agent's Representative will then give the Contractor written permission to proceed with the next stage of construction.

Random acceptance testing will be undertaken by the Roads Provision Department, Pavement and Geotechnical Engineering Branch.

The Contractor is to include in his rates for testing of all concrete items in accordance with clause C.7 of the Durban Standard Engineering Specifications.

PS. 16 SURVEY FOR, AND PREPARATION OF 'AS BUILT' DRAWINGS

The Contractor shall submit the following data in addition to the completed As-built drawings before a Certificate of Completion is issued: -

- The co-ordinate and levels at the top and toe of all banks at 5.0m intervals.
- The co-ordinate and levels of kerbs where there is a change in grade or direction of the kerb line or channel.
- The co-ordinate and levels of the existing road, fencing and paved area.
- The co-ordinate and levels of the final asphalt level.
- The co-ordinate and invert levels of drainage constructed (At the start, end and changes in direction)
- Co-ordinates, invert levels, cover levels of all stormwater & sewer controls in the site area.
- The co-ordinate and levels of all new and existing site furniture within the site area.
- Any other information that will describe the completed site area in its entirety.

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.

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
DD	Earthworks for Structures		
EB	Graded Crushed Stone	December	1988
ED	Road Asphalt	July	1992
EF	Kerbs and Haunches	July	1992
EG	Sidewalks, Footpaths and Median Areas	July	1992
EH	Steel Guardrails & Conc. Median Barriers		
EL	Dumprock Subgrade Improvement		
F	Protection Works	July	1992
PG	Non Pressure Pipelines and Pc Culverts	July	1992
PH	Manholes and Appurtenant Drainage Works	July	1992
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 DD	Earthworks for Structures
PS EB	Graded Crushed Stone
PS ED	Road Asphalt
PS EF	Kerbs and Haunches
PS EG	Sidewalks, Footpaths and Median Areas
PS EH	Steel Guardrails & Conc. Median Barriers
PS EL	Dumprock Subgrade Improvement
PS F	Protection Works
PS PG	Non Pressure Pipelines and Pc Culverts
PS PH	Manholes and Appurtenant Drainage Works
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PS. AB GENERAL SPECIFICATION**INDEX**

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PS.AB.1.4	POWER SUPPLY, WATER AND OTHER SERVICES
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PS.AB.17	STAKEHOLDER MANAGEMENT AND LIAISON
PS.AB.18	INCIDENTAL EXPENSES

PS.AB.1 SITE FACILITIES**PS.AB.1.1 Temporary Offices for Engineer and Staff**

No offices are required for the exclusive use by the Engineer or his staff.

PS.AB.1.2 Contractor's Camp Site/ Store Yard

The Contractor is responsible to provide a suitable site for his camp and to provide accommodation for his personnel and labourers. If the Employer can make any specific site available to the Contractor, such site will be pointed out to the Contractor.

(a) Contractor's Camp Site / Store Yard

The recommended position of the camp site/store yard will be pointed out by the Engineer. However, the Contractor may, if he prefers to have a camp site at another location of the work, site it elsewhere provided that he first obtains the written permission of the landowner, and subsequently the Engineer, to do so.

Any clearing of the site that is necessary and the making good after de-establishment will be the responsibility of the Contractor.

In addition to the requirements of SABS 1200A Clause 8.3.2.2 the following conditions shall also apply:

- (i) None of the existing roads shall be damaged in any way.

- (ii) No waterborne sewerage facilities or potable water connection are available on the site. The Contractor shall make his own arrangements in this regard.
- (iii) No electrical facilities exist on site.

It shall be the responsibility of the Contractor to make good any damage caused to the camp site area or any improvements on it, including services, and for reinstating it to its former condition when vacated. The standard of reinstatement must be to the satisfaction of the Engineer; Director: Real Estate and/or Director of Parks, Recreation and Beaches Department; or other owner. Particular attention should be directed to these requirements and written clearances from the relevant Departments or other owners will be required.

PS.AB.1.3 Accommodation of Employees

No employees except for security guards will be allowed to sleep or be accommodated on the site in urban areas. No housing is available for the Contractor's employees and the Contractor shall make his own arrangements to house his employees and to transport them to site. No informal housing or squatting will be allowed.

The Contractor shall provide the necessary ablution facilities at his camp site and the site of the works for the use of his employees. Chemical toilets only will be allowed where temporary facilities have to be provided.

PS.AB.1.4 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.AB.1.5 Security Services

The Contractor shall employ competent watchmen to guard the Works both by day and night. From the time any portion of the Works commences, until the Completion of the Works and the issue of the Certificate of Completion of the Works, the Contractor shall be responsible for protecting the property of the Employer and all persons having business on the Site from anything dangerous or likely to cause damage or injury. The Contractor shall take all practical precautions to avoid nuisance or inconvenience to the owners or occupier of properties near to the Site and to the public generally whilst carrying out the Works and shall at all times keep the Site clean and, in a safety, and satisfactory condition. Contractor shall make his own arrangements concerning the supply of security services to the site.

PS.AB.1.6 Dealing with Water

The Contractor shall properly deal with and dispose of water to ensure that the Works are kept sufficiently dry for their proper execution. For this purpose, he shall provide, operate and maintain in sufficient quantity such pumping equipment, well points, pipes and other equipment as may be necessary, and he shall also provide any sumps, furrows, coffer-dams and other temporary works as may be necessary to minimize damage, inconvenience or interference.

PS.AB.2 SERVICE CONNECTION FEE

Further to Clause AB.2.3, the Engineer does not require an office.

PS.AB.3 CONTRACTORS SUPERINTENDANCE

The contractor shall deploy full time-based suitable candidates on site for quality control, coordination of responsibilities to all site employees including subcontractors.

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

PS.AB.5 ROAD DEVIATIONS AND TRAFFIC CONTROL

1. Allowance has been made in the Bill of quantities for deviations. Cost of any additional deviations by the Contractor shall be included in the rates tendered and at the contractors own cost.

It shall be assumed that if no deviations are listed then no deviations will be measured as part of this contract.

2. Deviations required by the Contractor shall comply with the requirements of Clause AB.7. Details shall be submitted to the Engineer for approval for at least two weeks in advance of the date on which it is anticipated that the work on the deviation will commence.
3. On deviations provided in terms of (b) above, the contractor shall ensure at all times and during all weather conditions that all temporary surfaces that are intended to carry traffic are in fact trafficable with regards to reasonable standards of safety and comfort. No additional payment shall be made to the contractor for compliance with this clause.
4. Unless indicated otherwise over the entire length and for the duration of the contract, traffic is required to be accommodated in both directions at all times.
5. At all times signposts shall be detailed in the part of this document: "Safety in Road Construction".

PS.AB.6 PROVISION OF PLANT, SKILLED OR UNSKILLED LABOUR

As and when required, the contractor shall provide the essential plant, skilled or unskilled labour for the period stated by the Engineer or his Representative. This item rate shall be in hours.

PS.AB.7 PROGRESS PHOTOGRAPHS

Progress photographs will be required from the Contractor.

The Contractor is to submit USB monthly with photographs depicting progress of works on site.

Where required by the Engineer.

In addition, digital and aerial photographs shall be taken at the start of contract, midway and at the end of the contract across the entire site, or at the discretion of the Employer's Agent. This shall include the use

of a drone to capture the images.

The images shall be the property of the eThekweni Municipality and may be used from time to time to update the public on the progress of the works, whether at direct community engagements or broader publications such as newspapers and social media posts.

PS.AB.8 NOTICE BOARD

The typical notice board layout is given in Part C3.6.1.

PS.AB.9 SURVEY CONTROL AND SETTING OUT OF WORKS

It is the Contractors sole responsibility to ensure that land survey beacons, plot boundary pegs, reference marks, etc. identified during establishment are not covered disturbed or damaged.

The contractor will be held responsible for the cost of replacement, by a registered Land Surveyor, of any pegs disturbed during the operations on site.

Survey control will be provided to the contractor at the start of the contract. The contractor shall satisfy himself with the accuracy thereof and immediately bring any discrepancies to the attention of the Engineer

PS.AB.10 PROVING EXISTING SERVICES

The unit of measurement shall be the cubic metre (m³) with various depth horizons starting with up to 1,5 m depth and thereafter in 0,5 m increments.

The unit rate for proving existing services shall include for -

- (1) all as items (1), (5), (7), (8), and (9) of clause DB.8.5;
- (4) for proving services anywhere within the contract area and in advance of the main excavation; and
- (5) special care in excavation by hand in vicinity of services.

PS.AB.11 EXISTING SERVICES

1. Known Services

Most services in the area are visible. All these services are to be protected at all times. Any breakdown of these services, whether caused by the contractor or not MUST be reported to the local authority immediately. Any costs associated with the repair thereof will be apportioned once the appropriate investigation into the cause thereof is completed. This does not, however, indemnify the contractor against exploring the possibility of unknown services. The contractor shall apply for the necessary way leaves from the electricity department and Telkom.

2. Treatment of Existing Services

The Contractor shall take all necessary steps to ascertain the location of existing services before commencing any section of the works. Prior to the commencement of work in any area the Contractor shall carefully excavate to locate and mark the positions of all existing underground services affected by the works. He shall take all necessary precautions to protect any existing works whatsoever against damage which may arise and shall bear the full cost of the repairs to any damage caused as a result of his operations on site. Any damage to a service shall immediately be reported to the responsible authority and to the Engineer. The Contractor must liaise with all relevant authorities to satisfy himself that all existing services have been located. As built information supplied by the local authority must be regarded as a guide only. All necessary precaution must be taken to protect services.

Whenever it is necessary to disrupt essential services e.g., when excavating in the vicinity of a power supply line, the Contractor must liaise with all relevant authorities and the Engineer to obtain approval for proposed activities and their programming.

3. Damage To Services

As stated, costs associated with the repair to damaged services will be for the contractors account.

4. Reinstatement of Services and Structures Damaged During Construction

Services are in use and are to be regarded as essential. Repairs to any damaged services will be regarded as essential and will be done with urgency.

PS.AB.11.1 RAISE / LOWER EXISTING VALVES AND VALVE CHAMBER

Due to the dangerous situation occurring when 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 Waste Service 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 Engineer regarding the direction in which covers shall be

PS.AB.11.2 RAISE / LOWER EXISTING WATER METER / PIPES

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

PS.AB.11.3 VALVE / WATER METER DISCONNECT, RELOCATION AND INSTALLATION

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Engineer for acceptance control. However, before accepting any work, the Engineer may have further control tests carried out by the eThekweni

PS.AB.12 AS BUILT SURVEY/ DRAWINGS

The contractor is to provide a full survey drawing of the entire works, indicating all key aspects of the works including position of the fence, levels and street furniture within the scope of works, with particular emphasis to a complete tachey survey.

The contractor shall commission a surveyor close to the end of the works such that the survey shall be concluded on completion of the work.

Should the as built survey not be ready once the works are completed, the final payment certificate shall exclude payment for this item and a completion certificate and retention money shall be withheld until such time the as built survey is handed to the Engineer.

PS.AB.13 TESTING FOR SUB-GRADE MATERIAL

Process control

The Contractor shall arrange for all tests required for process control to be done by a laboratory acceptable to and approved by the Engineer. The Contractor may establish his own laboratory on site or he may employ the services of an independent commercial laboratory. Whatever method is used, the Contractor

must submit the results of tests carried out on materials and workmanship when submitting work for acceptance by the Engineer. The costs for these tests shall be deemed to be included in the relevant rates and no additional payment will be made for testing as required.

Acceptance control

The process control test results submitted by the Contractor for approval of materials and workmanship may be used by the Engineer for acceptance control. However, before accepting any work, the Engineer may have further control tests carried out by the eThekweni Municipality Laboratory. The cost of such additional tests will be covered by a provisional sum provided in the schedule of quantities, but tests that failed to confirm compliance with the specifications, will be for the account of the Contractor.

PS.AB.14 STAKEHOLDER MANAGEMENT AND LIAISON

The construction environment is one of uncertainty in terms of participation expected from various bodies, organisations and community structures that may present themselves in various guise and forms.

The employer has identified this as a contractual risk, but is unable to directly influence actions that will mitigate these risks. It is therefore a condition of this contract that any risk pertaining to the above stated conditions are placed as the sole responsibility of the contractor who is best suited to and possesses the most influence in identifying, mitigating and managing these risks.

The contractor is therefore required to take whatever steps deemed necessary to prevent any delays or cost implications to the project, by actively putting in place a Stakeholder Management Plan that deals with:

1. Create a Stakeholder Register which identifies all stakeholders at the onset and throughout the duration of the contract
2. Categorizing of stakeholders according to their interests, influence and contribution to the project
3. Rating of stakeholders according to their influence and power on the project
4. Addressing and communicating contractual opportunities to the identified groups
5. Identifying Risks associated with stakeholders
6. Continuous mitigation of Risks in terms of the Stakeholder Management Plan

The identification of Stakeholders and the contents of the Stakeholder Management Plan must be continuously updated, and shall be approved by the Employer's Agent.

PS.AB.18 INCIDENTAL EXPENSES

This item shall cover for any unforeseen items not included in the BOQ and will ONLY be used at the Engineer's discretion. The rate shall be PC Sum and a Percentage (%) for overhead cost.

PS. AH OCCUPATIONAL HEALTH AND SAFETY UNIT SPECIFICATION**INDEX****PS.AH.1 OCCUPATIONAL HEALTH AND SAFETY UNIT SPECIFICATION**

The contractor shall allow in their cost provision for complying with all the requirements as covered in the:

1. Site Specific Health and Safety Specification in terms of 2014 Construction Regulations, referenced C3.4.3
2. Baseline Risk assessment document in terms of Construction Regulation 5.1 (a), referenced C3.4.5

These documents are found under Part C3: Scope of Works subheading C3.4 Particular Specifications.

PS. B SITE CLEARANCE**INDEX**

PS.B.1	REMOVAL AND GRUBBING OF LARGE TREES AND STUMPS
PS.B.2	CLEANING, CLEARING AND FLUSHING OF EXISTING MANHOLES
PS.B.3	REMOVAL OF EXISTING FENCES, STORE ON SITE AND REINSTATE
PS.B.4	REMOVAL OF EXISTING STONES AND BOULDERS
PS.B.5	REMOVAL OF ROADWAYS
PS.B.6	REMOVAL OF BRICKWORK
PS.B.7	REMOVAL OF EXISTING PRECAST KERB AND CHANNEL / FILLET, ROADWAYS

PS.B.1 REMOVAL AND GRUBBING OF LARGE TREES AND STUMPS

The unit of measurement is Number (No.). Trees and stumps shall be termed large if the girth measured at its narrowest point in the first metre of its height above ground level is greater than 1,5 m. The rate shall cover the cost of clearing and grubbing and the disposal of material as specified in clause B.3.

PS.B.2 CLEANING, CLEARING AND FLUSHING OF EXISTING MANHOLES

The tendered rate shall include full compensation for all labour, material, screening of the structures and pipes for safety and environmental protective measures, equipment and plant as well as for all work and incidentals required to complete the work as specified.

PS.B.3 REMOVAL OF EXISTING FENCES, STORE ON SITE AND REINSTATE

The unit of measurement is linear metre (m). Notwithstanding the requirements of Clause B.8.5, the tendered rate shall also make provisions for the re-erection of fencing that is removed, including all additional material required to restore the fence to its original condition prior to construction also cover for labour and plant necessary for the careful removal of all fence (wooden or wire) and posts.

PS.B.4 REMOVAL OF EXISTING STONES AND BOULDERS

The contractor shall remove all existing boulders along the route including the ones that may exist on cut embankments to spoil on site. The unit shall be cubic metre (m³) and rate shall cover for the labour and plant necessary for the careful removal of all boulders, breaking where necessary, transportation including disposal on site.

PS.B.5 REMOVAL OF ROADWAYS

The unit of measurement is cubic metre (m³) net in place before removal. The Contractor shall make allowance in his rate for the neat trimming of the existing roadworks where the new road is to tie into the existing road and the rate shall include all haulage to an approved tip. Separate items will be provided where materials are to be carefully removed and stored on site for re-use.

PS.B.6 REMOVAL OF BRICKWORK

The cross reference to Clause B.8.18 in Clause B.8.9 shall be amended to refer to Clause B.8.21.

PS.B.7 REMOVAL OF EXISTING PRECAST KERB AND CHANNEL / FILLET, ROADWAYS

The unit of measurement shall be cubic metre (m³) and the rate shall include for the labour and plant necessary for the break up and removal / disposal of roadways, kerb, channel/fillet, asphalt extruded haunch, unreinforced concrete to approved tip site - measured per weighbridge tally slip.

PS.C CONCRETE WORKS**INDEX**

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PS.C.3	PLACING OF CONCRETE
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PS.C.30	SUPPLY AND INSTALL HEAVY DUTY DRIVEWAY ACCESS SLABS TO BE PLACED OVER V-DRAINS

PS.C.1 NEW SABS SPECIFICATION FOR PORTLAND BASED CEMENT

The new SABS ENV. 197-1 (adopted in 1996): Cement - composition, specification and conformity criteria Part 1: Common Cement, replaces SABS 471 - 1979, SABS 626 – 1971 and SABS 831 - 1971 in Clause C.2 of Part C: Concrete Work. This also has reference to Part G: Prestressing, specifically for the cement for grouting of prestressing ducts.

PS.C.2 PLANT FOR CONCRETE WORK

No hand mixing of concrete is allowed unless written approval is granted by the Engineer's Representative. Where mixing and placing of concrete is concerned, the contractor shall have at least one standby machine available for each operation of the process of mixing, hoisting, transportation or placing. No concrete may be commenced unless the above requirements are fully met.

PS.C.3 PLACING OF CONCRETE

No concrete is to be placed in the excavations until this has been approved by the Engineer or his Representative. The unit of measurement shall be cubic meters (m³) and it shall cover the supply, laying and vibration of concrete. The placing of concrete works shall be labour intensive with use of tools such as shovels, wheelbarrows etc as the Engineer may instruct.

PS.C.4 SUPPLY AND LAY GEOLOK BLOCK OR SIMILIAR APPROVED

The rate of this item shall cover the supply and lay of Geolok blocks or Loffestain blocks form a retaining wall, excavation for the retaining wall, concrete sliders, sand infill to the blocks and laying of concrete on the top row of the retaining wall. The unit of measurement shall be in square meters (m2).

PS.C.5 BASE FOUNDATION FOR RETAINING WALL

The unit of measurement shall be linear meters (m). The rate shall cover for the excavation of the retaining wall foundation, supply and lay of the base and compaction of the subgrade material.

PS.C.6 CONCRETE FOR RETAINING WALL

This section covers the supply and erection of Geolok concrete retaining blocks or similar approved. The work shall include casting of concrete foundations, excavation, backfilling behind retaining walls.

1. Excavation and Backfill

All backfill is to be compacted to 93% MOD. AASHTO density. The Contractor shall supply the Engineer with results of compaction tests and percentages of stabilisation tests on backfill. Backfill is to be benched into virgin soil.

2. Concrete (Structural)

The Contractor is to supply and erect retaining walls of standard heights ranging from 1,00m up to 2,00m as directed by the Engineer. The Engineer is to approve founding conditions prior to casting of concrete. The bottom of the blocks shall be set in wet concrete. Base concrete to be 25MPA @ 28 days.

3. Weep-holes

The unit of measurement shall be number (No.) and the rate shall include for all the materials, labour, tools necessary to construct the weepholes as specified in Clause F.5.6.2. In addition to the no fines concrete blocks, the Contractor shall make allowances for the P.V.C pipe to be filled with a no fines concrete plug.

4. Measurement and Payment

The rate shall cover the cost of excavation, spreading and backfilling, disposal of surplus material, labour, supply of materials, including reinforcement, compacting, curing, delivering the blocks to and stacking on the site, fixing blocks into position, lifting gear and supports necessary to keep units stable until the permanent support system is able to stabilize the blocks (including all details complete as per the detail drawings. No items are measured separately). No additional costs will be entertained to complete the walls as per the detail drawings.

The unit of measurement for erecting the retaining walls shall be square metre (m2).

PS.C.7 SUPPLY OF GEOFABRIC

The unit of measurement shall be linear meters (m). The rate shall cover for the provision and laying of a Kaymat U44 or approved geofabric.

PS.C.8 PROVISION OF CLEAN COARSE SAND FOR RETAINING WALL

The retaining wall fill material shall conform to the requirements of a Clean Coarse Sand Material as described in TRH 14.

PS.C.9 NEW SABS SPECIFICATION FOR PORTLAND BASED CEMENT

The new SABS ENV. 197-1 (adopted in 1996): Cement - composition, specification and conformity criteria Part 1: Common Cement, replaces SABS 471 - 1979, SABS 626 - 1971 and SABS 831 - 1971 in Clause C.2 of Part C: Concrete Work. This also has reference to Part G: Prestressing, specifically for the cement for grouting of prestressing ducts.

PS.C.10 PORTLAND BLAST FURNACE CEMENT (CLAUSE C.3.1)

Portland Blast furnace cement may be used in any part of the works except in sewer pipes and where H.A.C. has been specified. The Contractor's attention is however drawn to the characteristics of concrete made with this material and he shall ensure that no excavations containing such concrete are backfilled or structures loaded until the concrete being covered or loaded has achieved sufficient strength to withstand the imposed loads.

PS.C.11 MATERIALS AND PLANT FOR CONCRETE WORK

Where the mixing and placing of concrete is concerned, the Contractor shall have at least one standby machine available for each operation of the processes of mixing, hoisting, transporting or placing. No concrete work may be commenced unless the above requirements are fully met. All concrete is to be ready-mix concrete from an accredited supplier. No hand mixing will be permitted except for restricted conditions whereby hand mixing may be permitted.

PS.C.12 PLACING OF CONCRETE

No concrete is to be placed in the excavations until this has been approved by the Engineer or his Representative.

PS.C.13 CONCRETE TO WALL FOOTING

The rate of payment for this work shall be cubic metre (m³) and the Contractor shall allow in his price for the supply of all materials required to fully construct, handling, levelling, vibrating, soft board expansion joints, shuttering and Mesh Ref 193 for the reinforced concrete wall footing as detailed on Drawing No.48815.

PS.C.14 MASS CONCRETE IN AND BETWEEN TOP ROWS OF BLOCKS

The rate of payment for this work shall be cubic metre (m³) and the Contractor shall allow in his price for the supply of all materials required to fully construct, shuttering, handling, levelling, and vibrating, for the mass concrete in and between the top rows of blocks as detailed on Drawing No.48815.

PS.C.15 GRADE 20/26 AND 25/26 CONCRETE

The rate of payment for this work shall be cubic metre (m³) and the Contractor shall allow in his price for the supply of all materials required to fully construct, shuttering, handling, levelling, and vibrating, for the concrete to wall footings, if required and as directed by Engineer on Site as well as for the encasement to ducts as detailed on Drawing No.48815.

PS.C.16 STONE MAT / V-DRAINS / CONCRETE TRAPEZOIDAL DRAINS / TERRACE BLOK

Should the Engineer's Representative consider the trench bottom to be unsuitable or ground water excessive, a mat of 26 mm stone of not less than 150 mm depth extending shall be spread before the concrete blinding is cast. The stone mat should sit proud of concrete base. Payment width will be limited to the width of the foundation slab / drain. The Engineer's Representative's decision in this respect shall be

obtained before any material is used. No payment will be made for using a stone mat where this is not authorised.

The rate of payment for this work shall be per cubic metre and the Contractor shall allow in his price for the supply of all materials required to fully construct, excavation, handling, levelling, vibrating, soft board expansion joints, shuttering and Mesh Ref 193 for the reinforced concrete v-drains / concrete trapezoidal drains and Terrace Blok walls of the stone as detailed on Drawing No.48815. All concrete is to be ready-mix concrete from an accredited supplier.

PS.C.17 CONCRETE SURFACING

Concrete shall be cast in alternate panels with each panel making up the following dimensions width 2,25m, length 2.25m and nominal thickness 0,15m, with construction joints being formed both longitudinally and transversely. Payment for longitudinal and transverse joints will be paid separately.

No batching or hand mixing will be permitted.

The rate tendered for this item shall be per square meter (m2), for the specified thickness and compressive strength. The rate shall include for all plant, labour, and materials including preparatory works, formwork, texturing, curing and protection.

PS.C.18 HAND PLACING OF CONCRETE

No concrete is to be placed in the excavations until the base layer has been approved by the Engineer or his Representative.

The Contractor shall make allowance in his rates for hand placing of concrete and for fixing of tie bars as detailed in Drawing No. 48815.

The Contractors attention is drawn to the provisions of clause C.5.11, which states that concrete shall be placed within one hour from the time of discharge.

The Contractor shall note that texturing and curing of the concrete pavement will NOT be measured separately. The Contractor shall therefore allow for this in his rate for concrete surfacing.

PS.C.19 PREPARATION OF UNDERLYING LAYERS

When the temperature of the subbase exceeds 20⁰ C the subbase shall be wetted in advance of the placing of the concrete, keeping the surface continuously wet for a period of at least one hour before placing the concrete.

Immediately before placing of the concrete the excess water shall be broomed off the road so as to ensure that the subbase is still damp when the concrete is placed, but without puddles of water or pockets of mud.

The wetting is of particular importance during hot dry weather and no concrete shall be placed on a subbase which has not been wetted or which has dried out.

PS.C.20 LONGITUDINAL/TRANSVERSE JOINT TYPES

The Schedule of Quantities provides the Contractor with longitudinal and transverse joint types. The Contractor shall price these types of joints.

The longitudinal and transverse joints to be constructed shall be as detailed on Drawing No. 48815. Payment shall be under item C.4 as required.

The Contractor's rate shall include for all plant, labour and materials necessary for the construction of the specific joint but shall NOT include the supply and fixing of tie bars which shall be measured separately.

PS.C.21 TIE BARS

Tie bars shall consist of Y10 deformed bars complying with the requirements of SABS 920 as detailed on Drawing No. 48815.

Tie bars of the required dimensions and spacing shall be placed at right angles to joints. Tie bars shall be free of paint, grease or other coatings that may affect bond with the concrete.

At construction joints, the one half of the tie bar shall be supported on the subbase by means of suitable stools while the other half shall project into the adjacent pavement.

PS.C.22 FINISHING

The surface shall be roughened with a light pass of a stiff bristled broom applied transversely across the width of the road to create striations of about 1,5mm to 3,0mm in depth. In order to ensure straight brush marks, the brush shall be operated against a straight-edge laid at right angles to the pavement centre line.

PS.C.23 SMOOTHNESS OF SURFACING

The minimum number of surface irregularities permitted with a 3m rolling straight edge on each panel will be as follows:

- 10 mm – 2 No.
- 15 mm max – 1 No.

PS.C.24 PROTECTION OF THE CONCRETE PAVEMENT

The Contractor shall take precautions in the form of barricading and watchmen to keep pedestrians, cyclists, animals etc., off the freshly placed concrete, particularly outside normal working hours.

No vehicular traffic having an axle loading greater than 20 kN shall be run on the finished surface of a concrete pavement within a period of fourteen days of its completion, unless the Engineer permits a reduction of this period when the pavement is constructed during generally warm weather conditions. Rubber-tyred vehicles having an axle loading less than 20 kN and traveling at speeds not exceeding 25 km/h may be permitted after a period of seven days from the completion of a concrete pavement.

No vehicle with an axle load in excess of 80 kN shall be run on the completed surface at any stage of the contract.

PS.C.25 CURING

Curing shall be in accordance with the provisions of clause C.5.13. Methods (b) and (c), as included in C.5.13.2, shall NOT be permitted on the finished pavement surface.

PS.C.26 TESTS ON CONCRETE

The Roads Provision Department shall supervise the slump and air content testing and the making of the concrete cubes for compressive strength testing. The Contractor shall be responsible for the sampling, the provision of all equipment including concrete cube moulds, and for curing. The transporting of the cubes shall be the Contractor's responsibility. The testing of the cubes shall be done by the Pavement and Geotechnical Engineering Laboratory.

The procedure for sampling, manufacture of test cubes, storing, curing and testing shall be in accordance with the TMH1 Method D1. The following deviations from the above procedure shall apply:

When test cubes are prepared by rodding, six specimens shall be prepared per batch and the average of the three cube strengths shall be taken as one test result.

In the case of concrete pavements, a minimum of 6 test cubes shall be taken for each batch of concrete delivered to the site.

PS.C.27 LIQUID SEALANT IN JOINTS BETWEEN CONCRETE AND ASPHALT PAVEMENT

The liquid sealant used in joints between concrete and asphalt pavement shall be hot-poured type joint sealing compound placed in accordance with the manufacturer's specification. The Contractor is to submit sample specifications to the Engineer for approval prior to procuring of materials.

PS.C.28 PANEL ANCHOR

The Contractor's rate shall include for all plant, labour, materials and setting out necessary for the construction of the panel anchor as detailed in Drawing No. 48815.

PS.C.29 ANCHOR BLOCK

The Contractor's rate shall include for all plant, labour, materials and setting out necessary for the construction of the anchor block as detailed in Drawing No. 48815.

PS.C.30 SUPPLY AND INSTALL PRECAST CONCRETE HEAVY DUTY DRIVEWAY ACCESS SLABS TO BE PLACED OVER V-DRAINS

The Contractor's rate shall include for all plant, labour, materials and setting out necessary for the placing of slabs over the v-drains. The slabs shall 1.5m x 770mm (40Mpa concrete @ 28 days), with Y12 steel reinforcing placed in the middle of the slab. The unit of measure shall be Number (No.).

PS. DA EARTHWORKS: BULK**INDEX**

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PS.DA.14	RESTRICTED EXCAVATION
PS.DA.15	EXCAVATION BELOW FORMATION
PS.DA.16	IMPORT, PLACE AND COMPACT GRAVEL MATERIAL

PS.DA.1 INTERPRETATIONS

The following shall be added to the list of definitions.

Top of earthworks: The top of earthworks shall be defined as the underside of the subbase or selected layers under roads, the base under sidewalks and the underside of the topsoil layer under verges and embankments.

PS.DA.2 GEOTECHNICAL INFORMATION

There are no specific Geotechnical or site information available currently. Geotechnical testing will be required at the top of the subgrade level by a SANAS accredited Specialist Materials laboratory.

An item for this has been included in the Bill of quantities

PS.DA.3 EXCAVATION OF MATERIAL FROM SITE

- (a) Further to Clauses DA.8.1 and DA.8.3 Tenderer's are to note that the measurement of excavation of material on site is based on the cut volumes in place before excavation between the original ground levels after stripping of topsoil and the top of earthworks calculated from cross sections as described in Clause DA.8. **No allowance will be made for bulking or shrinkage, and it shall be assumed that 1 cubic metre of excavated material from the site shall form 1 cubic metre of compacted fill.**
- (b) The nature of the roadworks is such that a considerable amount of the excavation shall be in restricted conditions. No additional payment shall be made for such excavation and the Tenderer shall therefore make due allowance in the rates for Bulk Earthworks for any additional work or hand excavation.
- (c) The Contractor's attention is drawn to the presence of watermain in the road reserve area. The Contractor shall limit the size and type of construction plant used in this area so as not to damage the existing watermain. Any damage to the watermain due to the size and type of construction plant used will be to the Contractor's account.

No additional payment will be made for compliance with this clause and Tenderer's shall include in the relevant rate for all extra plant, labour and materials required to work in these areas.

PS.DA.4 EXCAVATE UNSUITABLE MATERIAL BELOW EMBANKMENTS OR FORMATION

Further to Clause DA.8.3 the rate shall also include for trimming the area excavated to the required level and compaction of the in-situ material.

PS.DA.5 IMPORT SUITABLE FILL MATERIAL

The unit of measurement shall be tight cubic metre (m³) The fill material shall conform to the requirements for a G7 Material as described in TRH 14 with the following Amendments: -

- a) The material shall be free of weathered shale and will be subject to the approval of the Engineer.

PS.DA.6 COMPACTION OF FILL

The second paragraph of Clause DA.8.5 is to be amended by substituting "top of earthworks" for "formation" where it occurs. Formation classification must be provided for preparation of formation.

PS.DA.7 FORMATION

The Tenderer shall make full allowance in the rates for areas of formation in cut or where the fill layer thickness is less than 150mm.

At formation level, the contractor is to invite the Project Engineers for a site inspection.

PS.DA.8 TOLERANCES

Clause DA.6 shall be amended to read as follows:

The allowable tolerances shall be:

- (a) the design angle ± 2 degrees for the angle of the cut or fill slope;
- (b) not less than the design width, nor more than 300 mm greater than the design width for the transverse horizontal embankment width at any level; and
- (c) the layer thickness ± 20 mm for topsoil;
- (d) For the formation, the Contractor will be required to place level pegs longitudinally at 10 m intervals on the road construction contract and elevation tolerances shall be taken on a section of the works. (When a portion of the works is less than 500 m² one tolerance reading per 10 m² shall be taken).

In any section the average of the elevations taken shall be such that the average thickness of the succeeding layer or layers above the formation shall be not less than that specified/nor greater than that specified plus 20 mm.

The standard deviation of the differences between the actual design levels shall not be greater than 10 mm.

PS.DA.9 GEOFABRIC BLANKET

The geofabric shall comply with Clause PG.3.8. The unit of measurement shall be square metre (m²). The rate shall include for the supply of the material, laying, joining, cutting and waste.

PS.DA.11 OVERHAUL

Notwithstanding the requirements of Clause DA.8.10, no additional payment shall be made for overhaul.

PS.DA.12 STOCKPILE HANDLING

Tenderers are to note that no stockpile handling will be payable on this contract. Cut material suitable for fill, shall be placed directly into fill without being stockpiled. If this is not possible, the Tenderer shall include in the bulk earthworks rates, any costs that he would incur in stockpiling and subsequent rehandling of material.

PS.DA.14 RESTRICTED EXCAVATION

The nature of the road works is such that a considerable amount of the excavation shall be in restricted conditions. No additional payment shall be made for such excavation and the Tenderer shall therefore make due allowance in the rates for Bulk Earthworks for any additional work or hand excavation. The contractor to note that the testing of material will be done on random for the subgrade test, all these tests will have to be undertaken by SANAS accredited Specialist Materials Laboratory with the approval of the Engineer.

PS.DA.15 EXCAVATION BELOW FORMATION

The contractor is to rip the existing material below formation to a depth of 150mm and thereafter compact the material to 95% Mod A.A.S.H.T.O

Measurement for payment shall be made in cubic metres (m³) as specified in DA.8.1(a)

PS.DA.16 IMPORT, PLACE AND COMPACT GRAVEL MATERIAL

The completed gravel material (G2, G5 and G7 as described in TRH14) layer shall be measured in cubic metres (m³) compacted in place. The rate shall cover the supply, loading, transporting, dumping, spreading, and all processing of the layer.

PS.DA.16.2 DELIVERY NOTES

Reconciliation of delivery notes for layer works.

All delivery slips for all materials (not copies but original slips), test results and classifications of all material including for pipes, concrete, kerbs are to be submitted to the Engineer with each payment claim. No payment will be released until the relative delivery slips and test results are received by the Engineer.

PS.DB EARTHWORKS FOR PIPE TRENCHES**INDEX**

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PS.DB.15	BARRACADING OF EXCAVATIONS

PS.DB.1 BEDDING AND BACKFILL MATERIALS**PS.DB.1.1 General**

- 1) The measurement for bedding shall be the total through length along the centre of the pipeline measured HORIZONTALLY with deductions made for line valve chambers.
- 2) Bedding material required for the backfill of bell holes will be paid for by the Council.
- 3) The unit of measurement for bedding shall be the Linear Metre (m), and the rate shall include for the placing and compacting of the bedding material up to the underside of the backfill for the various pipe diameters.
- 4) Separate items have been included in the Bill of Quantities for the provision of bedding material from a Contractor's commercial source.
- 5) Backfill materials shall comply with Clause DB.3.4. An item has been allowed in the Bill of Quantities for the importation of backfill material where so ordered by the Engineer.
- 6) The Contractor shall allow for haulage in the rate for provision of imported bedding and backfill. No overhaul will be paid for these items.

PS.DB.1.2 Stormwater Pipes

All bedding to stormwater pipes on this Contractor shall be either Type "B" or Type "C" as is specified in Part DB of the Departmental Technical Specification.

PS.DB.1.3 Location Of Services

The Contractor is required to locate existing services using information/plans from service providers and locating devices if the need arises. The measurement of payment shall be sum, and the rate shall include locating the existing services and marking these locations on site.

PS.DB.1.4 Relocation Of Services

Where indicated, the Contractor will be required to relocate existing services under the supervision of the service provider. The unit of measurement shall be sum. The unit rate shall include for the excavation for services; relocation of services including haulage, placing of services at the new allocated area and backfilling of the service trenches.

PS.DB.1.5 Repair And Adjustment Of Various Services

The cost of operation includes the repair, relocation, lowering and installation of various services with materials provided by the EThekweni Water Department. It also includes providing services connection to houses and the appointment of a Metro approved plumber. The unit of payment shall be sum

PS.DB.1.6 Telkom Ducts

Notwithstanding Clause DB.3.6 of Part DB : "Earthworks for pipe Trenches" or 'Type C', only a clean sand containing no particles of diameter exceeding 10mm, having a plasticity index (P.I) not exceeding 10 and free from vegetation and lumps shall be used for the bedding cradle and selected fill blanket. It is anticipated that most of the bedding material will have to be provided from an off-site source. Bedding shall be constructed to the dimensions as is detailed on drawing 38589 : Telkom Cable ducts and Junction box details.

PS.DB.2 EXCAVATION AND BACKFILLING - EXISTING SERVICES

The Tenderer's attention is drawn to the presence of existing services in the area. The Contractor may find it impractical to use mechanical plant for excavation on some portions of the works due to conditions caused by the presence of these services.

The Tenderer's attention is further drawn to the fact that his rates for excavation and backfilling must include for all costs associated with working around these existing services and their protection and accommodation, as no claim for extra payment will be accepted for increased working space or for the inability to use plant in any circumstances.

PS.DB.3 EXCAVATION, BACKFILLING AND REINSTATEMENT OF TRENCHES (CLAUSE DB.5.3.2)

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

- a) It is considered that portion of the excavated material will not comply with the specification for material suitable for backfilling. It will be the Contractors responsibility to use selective methods of excavation to ensure that this unsuitable material does not contaminate other materials suitable for reuse
- b) It is anticipated that a significant portion of of the material excavated for the trenches in existing natural ground is likely to be classified as "Rock" in terms of Part DB of the Departmental Technical Specification, and that blasting will b employed to facilitate excavation. Tenderers are to note that the unit of measurement shall be in linear metre (m) and that the rate tendered shall be inclusive of all works or operations necessary to drill, blast, excavate, backfill, spoil or stockpile the material.
- c) It is considered that portion of the excavated material will not comply with the specifications for material suitable for backfilling in areas subject to traffic loadin. An item has been included in the Bill of Quantities for the disposal of unsuitable material to tip and the Contractors tendered rate for this item shall include for stockpiling if deemed necessary.

- d) Where the Contractor chooses to trench by open excavation e.g. battering the sides of the trenches, this over excavation shall not be backfilled with unsuitable excavated material but shall be backfilled with the same imported material as used for the pay-width of the trench. Payment for the imported backfill shall be limited to the pay-width of the trench only and the Contractor shall allow in his rates for an extra backfill material that may be required as a result of over excavating.
- e) Notwithstanding the method of trench excavation adopted by the Contractor, the restriction on the maximum trench width as defined in specification Clause DB.6.1 – must be strictly adhered to. Should the Contractor over-excavate the trench then he will be responsible for increasing the pipe strength and/ or bedding class to be used, all to his cost.

The measurement for excavation shall be the total through-length along the centre-line of a pipeline measured HORIZONTALLY with deductions for the manhole. In addition, trench depth will be measured vertically on the centre-line of the pipe line from the existing ground level to the invert level.

PS.DB.4 SHORING OF TRENCHES TO EXCAVATIONS

The Contractor shall be responsible for the design and installation of all shoring where applicable, which must not only comply with all the relevant safety regulations pertaining to the provision of safe working conditions in earthwork excavation but also will provide sufficient lateral support to minimise any damage to adjacent structures, services or road surfaces.

In addition to the above and the requirements of Clause DB.5.3.2 (a) all excavations in road reserves and adjacent to structures and where excavations are in excess of 1.5m in depth shall be supported with close shoring and no open or intermittent shoring of any description will be permitted.

The minimum requirements for shoring of these trench excavations shall be as follows:

- 1) Either ribbed steel trench sheeting of suitable thickness with an edged return for interlocking or suitably sized timber poling boards or runners are to be used. Adequate sized waling's at suitable are to be provided. Struts shall consist of either adjustable tubular steel jacks or timber suitably sized for the load application.
- 2) The shoring for the excavation shall be progressively installed as the excavation proceeds. Care being taken to ensure the soil is not removed within a 300mm of the toe of the runners.
- 3) Installation of shoring after the trench has been excavated to a depth in excess of 1.5m is not acceptable.
- 4) Details of the proposed shoring must be supplied to the Engineer at least two weeks before the operation commences. During the backfilling, the sides of the trench including the road layers above an over-excavated sections are to be cut back to a point behind the over excavation.
- 5) No separate item has been allowed for In the Bill of Quantities and the Contractor shall allow in his excavation rates for shoring as necessary.

The cutting back of the trench sides shall be to the Contractors account. Payment for the reinstatement of the road hardening shall be based on the widths given in Clause DB.8.3.3

PS.DB.5 EXCAVATION FOR SERVICES TO BE LAID BY OTHERS

Where indicated, the Contractor shall be required to excavate a trench for the installation of services by others. (Depth and Width of the trench shall be confirmed on site). The trench bottom shall be trimmed to comply with the tolerances specified under Clause dB.6.3, after which it shall be taken over by the service organisation. After installation of the services, the trench shall be backfilled as part of the bedding operation to approximately 300mm above the service.

Thereafter the contractor shall continue the backfilling utilising suitable material from the trench excavation, in 150mm layers which shall be compacted to 955 Mod A.A.S.H.T.O density. The unit of measurement shall be the cubic metre (m³) and the rate shall cover the work described under Clause DB.8.1.

PS.DB.6 EXCAVATION IN ROAD AND PAVED AREAS

Further to clause DB.8.7 the rate tendered shall include for saw cutting the existing road asphalt

PS.DB.7 RESTRICTED EXCAVATION

The nature of the trench excavations are such that a considerable amount of the excavation shall be in restricted conditions. No additional payments shall be made on such excavations and the tenderer shall therefore make due allowances in the rates for additional work or hand excavation.

PS.DB.8 BACKFILLING

Where bedding is compacted by saturation, no backfill material may be placed or compacted on top of this, until such time as the bedding has sufficiently dried so that it may provide suitable lateral support to the pipe walls prior to loading.

PS.DB.9 COMPACTION OF TRENCHES

Further to Clause DB.8.5, Tenderers are to note that in all cases the compaction of the trench bottom and the trench backfill shall be to 95% Mod A.A.S.H.T.O. An extra over item has not been included in the bill of quantities and tenderers shall include for these costs under the relevant excavate and backfill items.

PS.DB.10 BACKFILLING OF SERVICE TRENCHES

As part of the bedding operation, services laid or relocated by other will be backfilled by them to approximately 300mm above the service. The backfill shall then be continued by the contractor up to the original level. The backfilling shall be carried out using suitable material from the trench excavation in 150mm layers which shall be compacted to 95% Mod A.A.S.H.T.O density. The unit of measurement shall be the cubic metre (m³) and the rate shall include for all plant and labour required to select, place and compact the material as specified.

PS.DB.11 OVERHAUL

Notwithstanding the requirements of Clause DB.8.1 and DB.8.17 no additional payment shall be made for haulage.

PS.DB.12 GEOFABRIC BLANKET

The geofabric to stone bedding must comply with Clause PG.3.8 of Part PG : Non pressure pipelines and Precast Concrete Culverts

The unit of measurement shall be the square metre (m²). The rate shall include for its supply, laying, joining, cutting and waste.

PS.DB.13 SOIL COMPACTION TESTING

The compaction control testing shall be carried out by the Contractor at his own expense.

Position,	Roadways	Sidewalks Other Locations
Trench formation	1 No. per 30 lin m	1 No. per 100 lin m
Bedding Cradle & Selected Fill Blanket	2 No. per 30 lin m	1 No. per 100 lin m
Backfill	1 No. per layer per 15 m ² or part thereof	1 No. per 2 layers per 50 m ² or part thereof

The positions of the tests shall be selected by the Engineer. The cost of all control testing is covered under the Preliminary and General section of the Schedule of Quantities. Acceptance testing is undertaken by the relevant Durban Corporation Department at the discretion of the Engineer after reviewing the results of the control testing.

PS.DB.14 SAFEGAURDING OF EXCAVATIONS

The precautions for excavations as specified in the relevant clauses in this section shall apply to all trench excavations.

The contractor or his agent or his representative shall take all the steps necessary to ensure that no person is required or allowed to work in a trench or any other unsupported overhanging excavation which is more than 1.0m deep and any excavation which has not been adequately supported, shored or braced if there is any danger whatsoever of the sides of the excavation collapsing. The support shoring or bracing to be designed and constructed by the contractor, shall be strong and sturdy enough to support the sides of the excavation in question.

The contractor shall note that this clause does not relieve him of any obligations

PS.DB.15 BARRACADING OF EXCAVATIONS

All excavation areas are to be barricaded to the satisfaction of the engineer.

All costs arising from these requirements are to be included in the relevant rates for the excavation.

PS.DD EARTHWORKS FOR STRUCTURES**INDEX**

PS.DD.1	GENERAL
PS.DD.2	EARTHWORKS FOR STRUCTURES
PS.DD.3	STOCKPILE HANDLING
PS.DD.4	BACKFILLING OF EXCAVATION AND WORKING SPACE
PS.DD.5	EXCAVATION TO SPOIL
PS.DD.6	OVERHAUL

PS.DD.1 GENERAL

Excavations for the retaining wall shall be carried out in accordance with the Departmental Specification Part DD - Earthworks for Structures.

Tenderers shall note that the excavation for structures is measured to the neat dimensions of the foundation in plan as if excavated with vertical or battered sides, according to the type of wall constructed.

No extra over payment shall be made for restricted excavation. The Tenderer shall note the instances where the nature of the excavation is restricted, and shall make allowance in the excavation rates.

No payment will be made for stockpile handling. Cut material suitable for fill shall be placed directly into fill without being stockpiled. If this is not possible, the Tenderer shall include in the earthworks rate for any costs that he may incur as a result of stockpiling and the subsequent re-handling of the material.

The unnecessary stockpiling of excavated material adjacent to the roadway will not be permitted. The Contractor will make due allowance for this in his rates.

Over-excavation for the concrete base of the retaining structure will be in-filled with grade 25/26 mass concrete at the Contractor's own expense. The Contractor shall take due precaution to ensure this does not occur.

PS.DD.2 EARTHWORKS FOR STRUCTURES

Excavation shall be carried out in accordance with the Departmental Specification Part DD - Earthworks for Structures.

Excavated material shall be stockpiled on site for use as backfill. No material shall be taken to spoil unless the Engineer shall have issued written confirmation that the material is deemed unsuitable for re-use.

Tenderers shall note that unless indicated otherwise excavation for structures is measured to the neat dimensions of the foundation in plan as if excavated with vertical sides.

PS.DD.3 STOCKPILE HANDLING

Tenderers are to note that no stockpile handling will be payable on this contract. Cut material suitable for fill, shall be placed directly into fill without being stockpiled. If this is not possible, the Tenderer shall include in the bulk earthworks rates, any costs that he would incur in stockpiling and subsequent rehandling of material.

PS.DD.4 BACKFILLING OF EXCAVATION AND WORKING SPACE

Two separate types of backfill operations are required to complete the work of this contract.

1. The first is the backfilling with beach sand or imported clean coarse sand of the working space on either side of the culvert in the portions excavated under this contract. The measurement for this backfilling procedure shall be the volume calculated by multiplying the height of the culvert by 500 mm over the length of the culvert for both sides of the culvert, for the portion excavated under this contract.

The unit of measure shall be cubic metres (m³) and the rate shall cover the work described under Clause DD.8.3. Two separate items are provided in the Bill of Quantities. One for backfilling using beach sand from a stockpile on site and one for backfilling using imported clean coarse sand. The rate for the imported clean coarse sand must also include all royalties and all haulage costs.

No extra payment shall be made for river sand or imported material not authorised or placed outside the pay width.

2. The second is the backfilling of the excavation above the deck of the culvert which is excavated under this contract. The unit of measure shall be cubic metres (m³) and the rate shall cover the work described under Clause DD.8.3. The measurement for this backfilling procedure shall be the volume calculated by multiplying the pay depth by the pay width over the length of the culvert. The pay depth shall be measured from level of formation to the top of the culvert deck and the pay width shall be the width of the culvert plus 500 mm on either side of the culvert.

Two separate items are provided in the Bill of Quantities. One for backfilling using beach sand from a stock pile and another for backfilling using excavated material from stockpile.

No extra payment shall be made for work outside the pay width.

PS.DD.5 EXCAVATION TO SPOIL

Clause DD.8.2(12) shall be replaced by the following:

The unit rate for excavation to spoil shall include for separation from suitable material, loading, deposition and spreading of excess and unsuitable material.

PS.DD.6 OVERHAUL

All spoil sites require prior approval by the engineer in writing. If any material is spoiled off site without written approval from the engineer for the respective spoil site, then the cost of overhaul will be to the account of the contractor.

PS. DW DAYWORKS**INDEX**

PS.DW1	SCOPE
PS.DW2	ORDERING OF DAYWORK
PS.DW3	MEASUREMENT AND PAYMENT

PS.DW1 SCOPE

This section covers the listing of daywork items in accordance with the General Conditions of Contract Clause 37, for use in determining payment for work which cannot be quantified in specific units in the Bill of Quantities or work ordered by the Engineer during the construction period which was not foreseen at tender stage and for which no applicable rate exists in the Bill of Quantities.

PSDW2 ORDERING OF DAYWORK

No daywork shall be undertaken unless written authorization has been obtained from the Engineer.

PSDW3 MEASUREMENT AND PAYMENT

Item	Unit
PSDW3.1 Plant and Equipment	
a) Tipper truck (10m ³ capacity or more)	hour (h)
b) Tipper truck (10m ³ capacity or more)	hour (h)
c) Water truck (10000 litre capacity)	hour (h)
d) Tractor loader backhoe (TLB)	hour (h)
e) Grader (AT140G or similar)	hour (h)
j) Pedestrian roller (Bomag 90 or similar)	hour (h)
g) Vibrating plate compactor (4kW capacity)	hour (h)
h) Mobile air compressor (10m ³ /min. capacity)	hour (h)
i) Paving breaker, air driven, including all attachments	hour (h)
j) Concrete mixer (0,6m ³ capacity)	hour (h)
k) Angle grinder (1 kW capacity)	hour (h)

The unit of measurement of item 3.1 shall be the hour for the item of plant or personnel. Non-working hours for transport breakdown, lack of operator or any other reason shall not be measured. The time shall be taken from the time that the personnel and/or plant depart until return.

Measurement shall only be for work instructed and directed by the Engineer, where the Engineer considers no other appropriate rate is available in the Schedule of Quantities. Prior to the commencement of any work by the labourers described under item 3.1, the Contractor must obtain written consent from the Engineer regarding the classification of all labourers in terms of “unskilled”, “semi-skilled” and “skilled” labourers.

The tendered rates for plant for pay item 3.1 shall be an all-inclusive hire charge for the use of the vehicle and driver or plant/equipment and operator and shall apply only to vehicles, plant and equipment nominated in writing by the Engineer, for all administrative, supervisory, operative and contingent costs, and profit, relating to the running of the plant.

PS. EB GRADED CRUSHED STONE**INDEX**

PS.EB.8.1	SUPPLY AND LAY GRADED CRUSHED STONE
PS.EB.8.1.1	SUPPLY AND LAY G2 MATERIAL, IMPORTED FROM COMMERCIAL SOURCES
PS.EB.8.1.2	SUPPLY AND LAY G5 MATERIAL, IMPORTED FROM COMMERCIAL SOURCES
PS.EB.8.1.3	SUPPLY AND LAY G7 MATERIAL, IMPORTED FROM COMMERCIAL SOURCES
PS.EB.8.2	PRIMING
PS.EB.8.3	DELIVERY NOTES

PS.EB.8.1 SUPPLY AND LAY GRADED CRUSHED STONE**PS.EB.8.1.1 SUPPLY AND LAY (G2) BASE MATERIAL, IMPORTED FROM COMMERCIAL SOURCES**

The completed 150mm thick G2 layer shall be measured in cubic metres (m³) compacted to 98% MOD AASTHO. The rate shall cover the supply, loading, transporting, dumping, spreading, and all processing of the layer. Furthermore, the fill material shall conform to the requirements for a G2 material as described in TRH 14 with the following Amendments:-

1. The material shall be free of weathered shale and will be subject to the approval of the Engineer.
2. Details of the source of the supply of the base material are required by the Engineer before road layerworks commence. A Certificate of Acceptance for this layer will only be issued by the Engineer when levels and densities are correct
3. No additional payment shall be made for restricted conditions, and the Tenderer shall therefore make due allowance in the rate for the graded crushed stone layer for any additional work (including hand work) required to place, spread, process and compact the layer in restricted conditions.

PS.EB.8.1.2 SUPPLY AND LAY (G5) BASE MATERIAL, IMPORTED FROM COMMERCIAL SOURCES

The completed 150mm thick G5 layer shall be measured in cubic metres (m³) compacted to 95% MOD AASTHO. The rate shall cover the supply, loading, transporting, dumping, spreading, and all processing of the layer. Furthermore, the fill material shall conform to the requirements for a G5 material as described in TRH 14 with the following Amendments:-

1. The material shall be free of weathered shale and will be subject to the approval of the Engineer.
2. Details of the source of the supply of the base material are required by the Engineer before road layerworks commence. A Certificate of Acceptance for this layer will only be issued by the Engineer when levels and densities are correct
3. No additional payment shall be made for restricted conditions, and the Tenderer shall therefore make due allowance in the rate for the graded crushed stone layer for any additional work (including hand work) required to place, spread, process and compact the layer in restricted conditions.

PS.EB.8.1.3 SUPPLY AND LAY (G7) NATURAL GRAVEL SUBGRADE MATERIAL, IMPORTED FROM COMMERCIAL SOURCES

The completed 150mm thick G7 layer shall be measured in cubic metres (m³) compacted to

93% MOD AASTHO. The rate shall cover the supply, loading, transporting, dumping, spreading, and all processing of the layer. Furthermore, the fill material shall conform to the requirements for a G7 material as described in TRH 14 with the following Amendments:-

a) The material shall be free of weathered shale and will be subject to the approval of the Engineer.

b) Details of the source of the supply of the base material are required by the Engineer before road layerworks commence. A Certificate of Acceptance for this layer will only be issued by the Engineer when levels and densities are correct

c) No additional payment shall be made for restricted conditions, and the Tenderer shall therefore make due allowance in the rate for the graded crushed stone layer for any additional work (including hand work) required to place, spread, process and compact the layer in restricted conditions.

PS.EB.8.2 PRIMING

The unit of measurement shall be square metres (m²) and the rate shall include for supply, labour and spreading of material.

After the Engineer has approved the base layer as referred to in EB.5.2, the base layer shall then be primed with an Inverted Emulsion Primer conforming to S.A.B.S. 1260 of 1979 and applied at the rate of 0,6 l/m².

PS.EB.3 DELIVERY NOTES

Reconciliation of delivery notes for layer works.

All delivery slips for all materials (not copies but original slips), test results and classifications of all material including for pipes, concrete, kerbs are to be submitted to the Engineer with each payment claim. No payment will be released until the relative delivery slips and test results are received by the Engineer.

PS. ED ROAD ASPHALT INDEX

PS.ED.1	SMOOTHNESS APPLICABLE TO WEARING COURSE
PS.ED.2	RESTRICTION ON PLACING OF ASPHALT
PS.ED.3	PATCHING OF EXISTING SURFACE
PS.ED.3.1	CONSTRUCTION
PS.ED.3.2	MATERIALS
PS.ED.3.3	MEASUREMENT AND PAYMENT
PS.ED.4	WEARING COURSE
PS.ED.5	LAYING OF ASPHALT
PS.ED.6	LONGITUDINAL AND TRANSVERSE JOINTS
PS.ED.7	SAW CUT TO LONGITUDINAL AND TRANSVERSE JOINTS
PS.ED.8	TECHNICAL SPECIFICATION FOR ASPHALT

PS.ED.1 SMOOTHNESS APPLICABLE TO WEARING COURSE (Clause ED.6.2)

The smoothness applicable to the wearing course shall be that specified in Clause ED.6.2(b) under the heading “Category B Roads”.

PS.ED.2 RESTRICTION ON PLACING OF ASPHALT

The Contractor shall, wherever possible, complete the earthworks and compaction to sidewalks prior to the laying of the wearing course on the adjacent section of road so as to prevent construction plant and equipment from damaging the freshly laid wearing course. The asphalt wearing course shall not be laid until the entire base course has been laid and the trees and street lighting to the centre median have been placed.

PS.ED.3 PATCHING OF EXISTING SURFACE

Where existing roads are to be patched, or prior to resurfacing existing roads, those areas of the existing asphalt pavement which require patching will be marked by the Engineer.

PS.ED.3.1 CONSTRUCTION

In the areas to be patched the in-situ asphalt surfacing shall be removed to a depth of 100 mm. The sides shall be cut vertically with the edges square. The exposed surface shall be swept of all loose material, a tack coat applied to the bottom and sides and then patched with asphalt base course. After compaction the surface of the patch shall be flush with the adjacent road surface.

PS.ED.3.2 MATERIALS

The asphalt base course shall comply with the requirements of Part ED: Road Asphalt.

PS.ED.3.3 MEASUREMENT AND PAYMENT

The unit of measurement shall be the tonne (t) and the rate shall include for removal of the in-situ layers, trimming the sides, compaction, application of the tack coat, supply and laying of the asphalt, loading and haulage to the tip of excess material.

PS.ED.4 WEARING COURSE

Continuously Graded Wearing Course

The continuously graded wearing course shall be a 40 mm compacted layer of hot asphalt (Sa-S10)

The asphalt shall have the following properties:

Grading Envelope	
Sieve Size in mm	% Passing by Mass
19,00	100
13.20	96 ± 4%
9.500	82 ± 8%
4.750	60 ± 8%
2.360	44 ± 8%
1.180	32 ± 6%
0.600	23 ± 5%
0.300	15 ± 5%
0.150	9 ± 3%
0.075	6 ± 2%
Residual bitumen by mass (35/50 pen: Specified percentage 5.0 ± 0,3%.	

PS.ED.5 LAYING OF ASPHALT

- (a) The Contractor shall supply the Employer's Agent with the name of the asphalt Sub-Contractor before asphalt is laid.

The asphalt shall be laid by an approved paving machine. Hand-laying shall be permitted at the Employer's Agent's discretion when the area involved is small. The asphalt shall not be laid if its temperature is below 140°C.

The asphalt shall be rolled in accordance with the method described in chapter VI of the Asphalt Institute Paving Manual (MS-8). The density of the layer shall satisfy the following:

$X \geq 93\% \text{ Maximum Theoretical Relative Density} + 0.5 S$ where:-

X - Arithmetic means of densities

S - Standard deviation

An acceptance certificate for this layer will be issued by the Employer's Agent's inspector when all requirements have been met.

- (b) Further to Clause ED.8.1, the rate tendered shall include for all extra work required to lay and compact the asphalt base and make-up courses in restricted areas.

PS.ED.6 LONGITUDINAL AND TRANSVERSE JOINTS

Tenderers are to note that the tendered rate per Section 3 Item ED.3 and 4 are not to include for saw cutting. If the Engineer requires the joint to be saw cut, the saw cutting to the longitudinal joint and transverse joint will be paid for under Section 3 Item ED.5 as an extra over to Section 3 Items ED.3 & 4.

A longitudinal joint is to be formed by cutting into the existing road surface by a width of 300 mm to a depth of 50 mm where the new surface is to be tied longitudinally into the adjacent existing pavement as shown on Drawing No. 47929. The position of the joint shall be indicated by the Engineer on site. After cutting / milling the joint shall be swept of all loose material and painted with a tack coat.

Cutting of the joints shall only take place immediately prior to the laying of the wearing course.

The unit of measurement shall be linear metre (m). The rate tendered shall cover the neat cutting of the joint, the cutting of the additional 150 mm step into the existing adjacent asphalt base layers as shown on Drawing No. 47929 and the removal of all the old asphalt to tip off site inclusive of haulage.

PS.ED.7 SAW CUT TO LONGITUDINAL AND TRANSVERSE JOINTS

The saw cut shall be cut with a diamond cutter to a neat uniform line 50 mm deep along the edge of the existing road where directed by the Engineer.

The unit of measurement for the saw cut shall be linear metre (m) and the rate shall cover the overall depth of cut.

PS.ED.8 TECHNICAL SPECIFICATION FOR ASPHALT

Reference is made to the Technical Specification for Asphalt which is included in this project specification as item ED 8. The Technical Specification for Asphalt covers the design and manufacture of hot/warm mix asphalt.

In the event of any discrepancy between any item of the Standard Engineering Specification - Part ED and the ***Technical Specification for Asphalt***, the latter document shall take precedence.

Items within the ***Technical Specification for Asphalt*** which supersede, whole or in part, the Standard Engineering Specification include but are not limited to the following:

ED 3. MATERIALS

ED 4.1 MIXING PLANT

ED 7. TESTING

1. SCOPE

This specification covers the manufacture of hot/warm mix asphalt. There are a total of 15 hot/warm asphalt mixes covered in this specification:

- **9 sand skeleton mixes**
 - Designated “Sa”
 - 3 NMAS mix sizes
 - “10”, “14” mm and “20” mm
 - For use in :
 - Standard traffic loading and speed conditions (“S”)
 - Heavy traffic loading and speed conditions (“H”)
 - Very Heavy traffic loading and speed conditions (“V”)
 - Extreme traffic loading and speed conditions (“E”)
- **4 SMA (stone skeleton) mixes**
 - Designated “SMA”
 - 2 NMAS mix sizes
 - “10” mm and “14” mm
 - For use in :
 - Very Heavy traffic loading and speed conditions (“V”)
 - Extreme traffic loading and speed conditions (“E”)
- **2 EME mixes**
 - Designated “EME”
 - 2 NMAS mix sizes
 - “14” mm and “20” mm
 - For use in :-
 - Extreme traffic loading and speed conditions (“E”)

(A “Sa-H14” mix is thus a Sand Skeleton mix of Nominal Maximum Aggregate Size 14.0mm to be used in Heavy traffic loading and speed conditions. A description of every mix required can be found in Table 5).

2. REFERENCES AND STANDARD SPECIFICATIONS

Reference to the following standard specifications, guideline documents and codes of practice (Table 1) shall be deemed to be references to the latest issues of the relevant documents:-

SANS 9001	Quality management systems – Requirements
SANS 4001-BT1	Penetration grade bitumen
SANS 4001-BT3	Anionic bitumen road emulsions
SANS 4001-BT4	Cationic bitumen road emulsions
SANS 1083	Aggregates from natural sources
SANS 824	Lime for soil stabilization
SANS 50197-1	Cement – Part 1:Composition, specification & conformity criteria for common cements
SANS 1491:Part 1	Portland cement extenders - Part 1:Ground granulated blast-furnace slag
SANS 1491:Part 2	Portland cement extenders - Part 2:Fly ash
Act 85 of 1993	Occupational health and safety act
Act 39 of 2004	National environmental management : Air quality act
Sabita Manual 5	Guidelines for the manufacture and construction of hot mix asphalt
Sabita Manual 27	Guidelines for thin hot mix asphalt wearing courses on residential streets
Sabita Manual 32	Best practice guideline for warm mix asphalt
Sabita Manual 33	Interim design procedure for high modulus asphalt
Sabita Manual 35	Design and use of asphalt in road pavements

Sabita TG1	The use of modified bituminous binder in road construction
TRH 21	Hot mix recycled asphalt

Table 1 Reference and Standard Specifications**3. MATERIAL****3.1. Bituminous Binder**

Binder selection shall be guided by both the asphalt mix requirements outlined in section 4 and the South African PG Binder Classification System.

Straight run bituminous binders shall conform to SANS 4001-BT1 and shall be selected from penetration grades 10/20, 15/25, 35/50 or 50/70.

Modified binders shall be selected from A-E1, A-E2, A-P1 A-H1 or A-H2 and shall comply with the requirements of Tables 7 and 9 respectively from the Sabita Technical Guideline TG1.

The binder penetration grade, the type of modifier used (as applicable) and the SA PG Binder Classification shall be indicated in the mix design report.

3.2. Aggregates**3.2.1. Coarse Aggregate**

Coarse aggregate shall comprise single sized, clean, unweathered material and shall be free from organic matter and other deleterious substances. The aggregate shall conform to the requirements of Table 2 "Aggregate Quality Requirements". The grading and dust content of the aggregate shall comply with the requirements of Table 4302/8 of the COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998).

3.2.2. Fine Aggregate

Fine aggregate shall consist of the mineral matter passing the 5,00 mm sieve and retained on the 0,075 mm sieve and shall consist predominantly of freshly crushed aggregate or clean, natural hard sand. Fine aggregate shall conform to the requirements of Table 2 "Aggregate Quality Requirements". Material derived from the mechanical crushing or milling of rock shall be well graded between 5.0mm and 0.075mm. The grading and dust content of material derived from the natural disintegration of rock shall comply with the requirements of SANS 1083 Table 1 (Column 2).

The use of natural sands is limited or prohibited in certain asphalt mixes. These limitations are quantified under section 3.2.5 "Aggregate Blends".

3.2.3. Filler

Filler shall comprise the material predominantly passing the 0.075 mm sieve and shall consist of either inert material (crushed rock fines) or an approved active filler or a combination thereof.

Active filler shall consist of either milled blast furnace slag, hydrated lime, portland cement, fly-ash or a combination of these materials. Active fillers shall conform to the relevant SANS specification for the particular material. Filler shall also conform to the requirements of Table 2 "Aggregate Quality Requirements".

The permissible active filler content in any asphalt mix shall be no more than 2% by mass of mix aggregates.

3.2.4. Reclaimed Asphalt

Fragments of asphalt obtained from the road or from stockpiles of discarded asphalt may be used in the manufacture of asphalt mixes. Reclaimed asphalt (RA) shall be characterized and processed in accordance with the recommendations set out in TRH 21 "Hot mix recycled asphalt".

The RA content of asphalt mixes shall be limited as noted in Table 3.

Mix Type	Maximum RA Content
Sand Skeleton Mixes	50%
SMA	0%
EME	20%

Table 3 Permissible RA Content

3.2.5. Aggregate Blends

Aggregates shall be blended in such a manner so as to produce an asphalt mix conforming to the requirements of each particular mix type and nominal maximum particle size. The required aggregate blending will be achieved through the mix design process.

3.2.5.1. Sand Skeleton Mixes

Aggregate gradings are required for 3 nominal maximum particle size (NMPS) mixes (ie. 10mm, 14mm and 20mm). The aggregate grading for these mixes shall be guided by the control points in Table 4.

Sieve Size (mm)	Percent Passing					
	Nominal Maximum Particle Size (NMPS)					
	10mm		14mm		20mm	
	Min.	Min.	Min.	Max.	Min.	Max.
37.5						
28					100	
20			100		80	100
14	100		80	100		85
10	80	100		85		
7.1		85				
5						
2	32	67	28	58	23	49
1						
0.6						
0.3						
0.15						
0.075	2	10	2	10	2	8

Table 4 Sand Skeleton Asphalt Mix Grading Control Points

A maximum of 10% natural sand (by mass of mix aggregates) may be used in sand skeleton mix types Sa-H, Sa-V and Sa-E.

The reclaimed asphalt (RA) content of sand skeleton mixes shall be limited to 50% maximum as noted in Table 3.

3.2.5.2. Stone Mastic Asphalt (SMA) Mixes

Stone Mastic Asphalt is a stone skeleton mix type. The aggregate grading for SMA mixes shall be guided by the requirement that the stone skeleton coarse aggregate structure is not dilated by the mastic in the voids of the stone skeleton structure.

The use of “natural” sand shall not be permitted in SMA mixes.

The use of reclaimed asphalt (RA) shall not be permitted in SMA mixes.

SMA grading blends are required for two SMA NMPS mixes :-

- 10mm
- 14mm

3.2.5.3. Enrobé à Module Élevé (EME) Mixes

EME aggregate gradings shall be guided by the requirements outlined in Sabita Manual 33 “Interim design procedure for high modulus asphalt”.

The use of “natural” sand shall not be permitted in EME mixes.

The reclaimed asphalt (RA) content of EME mixes shall be limited to 20% maximum as noted in Table 3.

EME grading blends are required for two EME NMPS mixes :-

- 14mm
- 20mm

Warm Mix Asphalt Technologies/Additives

Warm Mix Asphalt (WMA) technologies/additives shall conform to the appropriate requirements outlined in SABITA Manual 32 “Best practice guideline for warm mix asphalt” and shall be approved prior to use. The contractor shall provide the Roads Provision Department with the name and type of technology/additive to be used together with any other technical information pertinent to its use in the asphalt mix.

Aggregate Property		Coarse Aggregate		Fine Aggregate (Crushed Rock)	Fine Aggregate (Natural Sand) ¹	Combined Total Fine Aggregate	Inert Filler	Active Filler
Parent Material		Clean unweathered crushed rock		Clean unweathered crushed rock	Clean natural fines not obtained from crushed parent rock	-	Unweathered rock dust	Approved commercial non-plastic material
		Sand Skeleton Mixes (Sa, EME)	Stone Skeleton Mixes (SMA)					
Grading		COLTO Standard Specifications for Road and Bridge Works for State Road Authorities (1998) Table 4302/8		Well graded between 5.0mm and 0.075mm sieves	SANS 1083 Table 1 (Column 2)	Passing 5.0mm sieve	P _{0.075} > 75%	P _{0.075} > 75%
ACV (%) (max.)		25	21	25 (Parent rock)	-	-	-	-
10% FACT (Dry) (Min.)		160 kN	210 kN	-	-	-	-	-
10%FACT (Wet) (Min.)		75% of 10% FACT (Dry) Value	75% of 10% FACT (Dry) Value	-	-	-	-	-
Flakiness Index (Max.)	20mm & 14mm Aggregate	25		-	-	-	-	-
	10mm & 7.1mm Aggregate	30		-	-	-	-	-
	SMA Mixes	20		-	-	-	-	-
Polished Stone Value (Min.)		50		-	-	-	-	-
Water Absorption (%) (Max.)		1.0		1.5	1.5	1.5	-	-
Sand Equivalent (%) (Min.)		-		40	River	50	-	-
					80			
Methylene Blue Adsorption Value (Max.)		-		0.7	0.7	0.7	-	-
Permissible Content (% by Mass of Mix Aggregates)		-		-	0 - 10	-	-	0 – 2

1. Natural sand is not permitted in SMA mixes.

Table 2 Aggregate Quality Requirements

4. HOT/WARM MIX ASPHALT MIXES AND DESIGN

4.1. Asphalt Mix Requirements

There are a total of 15 mixes required:-

- 9 sand skeleton mixes (i.e. continuously graded mixes)
- 4 SMA (stone skeleton) mixes
- 2 EME mixes

The required asphalt mixes are depicted in Table 5. However, traffic condition risk profiles require additional higher levels of design for particular mixes (Table 6).

Sand Skeleton Mixes (Sa)		Nominal Maximum Particle Size		
Traffic Condition Category		10.0	14.0	20.0
S	Standard Conditions	Sa-S10	Sa-S14	
H	Heavy Conditions	Sa-H10	Sa-H14	Sa-H20
V	Very Heavy Conditions		Sa-V14	Sa-V20
E	Extreme Conditions		Sa-E14	Sa-E20
Design Level	Mix Types			
Level I	Sa-S10, Sa-S14			
Level II	Sa-H10, Sa-H14, Sa-H20, Sa-V14, Sa-V20			
Level III	Sa-E14, Sa-E20			

Stone Mastic Asphalt (SMA)		Nominal Maximum Particle Size		
Traffic Condition Category		10.0	14.0	20.0
S	Standard Conditions			
H	Heavy Conditions			
V	Very Heavy Conditions	SMA-V10	SMA-V14	
E	Extreme Conditions	SMA-E10	SMA-E14	

Enrobé à Module Élevé (EME)		Nominal Maximum Particle Size		
Traffic Condition Category		10.0	14.0	20.0
S	Standard Conditions			
H	Heavy Conditions			
V	Very Heavy Conditions			
E	Extreme Conditions		EME-E14	EME-E20

Table 5 Asphalt Mix Requirements

Traffic Volume (million E80's)	Traffic Condition Category		
	Traffic Speed (km/h)		
	< 20	20 - 70	> 70
< 3	H	S	S
3 to 10	V	H	H
10 to 30	E	V	V
> 30	E	E	E

Table 6 Traffic Condition Risk Profiles

The typical use of various mix types and mix NMPS is portrayed in Table 7..

Asphalt Mix Use			Mix Type
Mix Nominal Maximum Particle Size (NMPS)			
10.0	14.0	20.0	
Patching/ Handwork			Sa
Wearing Course (Paved)			Sa, SMA
	Base Course (Paved)		Sa, EME

Table 7 Typical Mix Use**4.2. Asphalt Mix Design**

Asphalt mix designs are required for every mix supplied. Mix designs for each mix type are to be conducted in accordance with the guidelines noted in Table 8.

Sand Skeleton Mixes	Sabita Manual 35	Design and use of asphalt in road pavements
Stone Mastic Asphalt (SMA)	Sabita Manual 35	Design and use of asphalt in road pavements (Appendix B)
Enrobé à Module Élevé (EME)	Sabita Manual 33	Interim design procedure for high modulus asphalt

Table 8 Asphalt Mix Design Guideline Documents

The mix design process shall consist of a laboratory design, a plant trial and (if required) a paved trial. Once satisfied that the laboratory design and plant and paved trials meet the specified mix requirements, the contractor is to document the final mix parameters (i.e. the Job Mix Formula (JMF)). These parameters will be used for production quality control and acceptance purposes (see Table 9).

Grading
Voids in the Mix (@ design compaction)
Binder Content

Table 9 Mix Parameters for the Job Mix Formula

The contractor shall also include the following “mix characteristics” as a part of his mix design submission :-

- A unique identification number for every mix design
- The binder storage constraints (e.g. maximum storage times, etc.)
- The type of modifier used and the modified binder characteristics to TG1 (if applicable)
- Binder classification in terms of the SA PG Binder Classification System
- Whether the asphalt mix is using a Warm Mix Asphalt technology/additive. The contractor shall comment on any modifications to the “standard” mix design process consequential to the use of the Warm Mix Asphalt technology/additive.
- The maximum mix temperature in the truck at the exit from the plant (in line with industry norms)
- The minimum mix temperature in the truck on delivery (in line with industry norms)
- The minimum recommended mix temperature for compaction of the mix on site (in line with industry norms)
- Comment on any asphalt mix characteristics that should be brought to the attention of the asphalt paving/laying team on site (e.g. EME asphalt mix longitudinal joint construction)

Should substantial changes to material types and properties occur, the asphalt mix designs for affected mixes shall be reviewed and where necessary re-constituted and re-submitted for approval.

4.2.1. Sand Skeleton Mixes

Designs of sand skeleton asphalt mixes are to be conducted in accordance with the guidelines set out in Sabita Manual 35 “Design and use of asphalt in road pavements”. Designs are to be conducted in accordance with the appropriate level (i.e. I, II and III) as indicated in Table 5.

4.2.1.1. Level I Design

The Level I design is aimed primarily at verification of the mix volumetric. However, a Level I design is a pre-requisite for the Level II and III designs.

Asphalt mixes shall achieve the volumetric criteria noted in Table 11 at the compaction effort noted in Table 10 (or Tables 14 or 17 as applicable) with a design air void content of 4%.

Traffic Condition Category	Marshall	Gyratory
	SANS 3001 AS1	AASHTO T 312
	No. Blows	N _{design}
Standard (S)	75+45	75

Table 10 Volumetric Compaction Requirements (Level I)

	NMPS		
	10	14	20
VMA (min.)	15	14	13
VFB	65 - 75	65 - 75	65 - 75

Table 11 Mix Design Requirements (Level I)

Asphalt mixes designed at Level I shall meet the requirements for the empirical performance tests noted in Table 12.

Test	Requirement	Test Method
Modified Lottman (TSR)	0.8 min.	ASTM D 4867 M
Indirect tensile strength (@ 25°C)	900 kPa - 1 650 kPa	ASTM D 6931-07
Dynamic creep (@ 40°C)	10 MPa min.	CSIR RMT 004
Water permeability	0.1mm/s - 4 mm/s	EN 12697-19
Air Permeability (@ 7% Voids) (x 10 ⁻⁸ cm ²)	1.0 max.	TRH 8 App C
Marshall Stability, Flow and Quotient	Report	SANS 3001-AS2

Table 12 Empirical Performance Tests (Level I)

4.2.1.1.1. Particular Mix Requirements – Mix Sa-S10

Mix Sa-S10 is to be utilized for lightly trafficked residential streets and patching (handwork). Due attention should be paid to the recommendations of Sabita Manual 27 “Guidelines for thin hot mix asphalt wearing courses on residential streets “ in the design of mix “Sa-S10”. The additional mix characteristics noted in Table 13 are also required.

	NMPS
	10
Filler/Binder Ratio (Max.)	1.3
Binder Film Thickness (Min.)	7.5

Table 13 Mix Design Requirements

4.2.1.2. Level II Design

The compaction requirements for the Level I design as a precursor to the Level II performance design shall be as noted in Table 14. The design air void content shall be 4%.

Traffic Condition Category	Marshall	Gyratory
	SANS 3001 AS1	AASHTO T 312
	No. Blows	N _{design}
Heavy (H) & Very Heavy (V)	-	100

Table 14 Volumetrics Compaction Requirements (Level II)

In addition to meeting the mix requirements outlined in the Level I design, the mix design at Level II shall meet the performance characteristics noted in Tables 15 and 16.

Property	Test conditions	Specification	Test method
Workability	Superpave gyratory compactor - air voids after 25 gyrations (max.)	7%	ASTM D 6925
Durability	Modified Lottman test conditions (min.)	0.8	ASTM D 4867M
Stiffness/ (dynamic modulus)	Dynamic modulus @ 20°C Loading frequencies of 0.1, 0.5, 1, 5, 10, 25 Hz	Report	AASHTO TP 79
Permanent deformation	HWTT at relevant number of passes	See Table 16	AASHTO T 324
Fatigue	Four-point beam fatigue test @ 10°C, 10Hz to 50% stiffness reduction Strain levels 200, 400, 600µε	Report	AASHTO T 321

Table 15 Performance Tests (Level II)

Temperature Zone	6mm Rut	Stripping Point
	No. of Passes (Min.)	
PG 58 Zone	16 000	10 000
PG 64 Zone	20 000	10 000

Table 16 Hamburg Wheel Tracking Test Specifications**4.2.1.3. Level III Design**

The compaction requirements for the Level I design as a precursor to the Level III performance design shall be as noted in Table 17. The design air void content shall be 4%.

Traffic Condition Category	Marshall	Gyratory
	SANS 3001 AS1	AASHTO T 312
	No. Blows	N _{design}
Extreme (E)	-	125

Table 17 Volumetrics Compaction Requirements (Level III)

In addition to meeting the mix requirements outlined in the Level I design, the mix design at Level III shall meet the performance characteristics noted in Tables 15 and 16 with the additional test temperatures for Stiffness and Fatigue as indicated in Table 18.

Property	Test conditions	Specification	Test method
Stiffness (dynamic modulus)	Dynamic modulus @ -5, 5, 20, 40, 55°C Loading frequencies of 0.1, 0.5, 1, 5, 10, 25 Hz	Report	AASHTO TP 79
Fatigue	Four-point beam fatigue test @ 5, 10 and 20°C, 10Hz to 50% stiffness reduction Strain levels 200, 400, 600µε	Report	AASHTO T 321

Table 18 Additional Temperatures for Stiffness and Fatigue Tests (Level III)

4.2.2. Stone Mastic Asphalt Mixes

Stone Mastic Asphalt (SMA) mix designs are to be conducted in accordance with the guidelines set out in Sabita Manual 35 “Design and use of asphalt in road pavements – Appendix B”.

SMA mixes are required for two NMPS:-

- 10mm
- 14mm

The mix design should ensure that the fine aggregate mortar should not induce dilation of the coarse aggregate stone skeleton mix after compaction on site thereby ensuring coarse aggregate interlock. Coarse aggregate for both NMPS will be defined as all material retained on the 5mm sieve.

The stability of the fine aggregate mortar will require enhancement with either cellulose fibre or through modification of the binder or both.

The compacted mix should form an impervious surfacing meeting the water permeability and air permeability requirements noted in Table 12.

The SMA mix shall also conform to the requirements in Table 19.

Design Air Void Content (%)	4.0
Bitumen Content (Min.)	6.0
Voids in Mineral Aggregate (VMA) (Min.)	17
Modified Lottman (TSR) (Min.)	0.7
Schellenberg Drainage Test (%) (Max.)	0.3
VCA _{mix} ¹ (%)	< VCA _{drc} ²

Note 1. VCA_{mix} is the voids in coarse aggregate (>5mm) of the compacted mix.

Note 2. VCA_{drc} is the voids in coarse aggregate (>5mm) of the dry rodded coarse aggregate.

Table 19 SMA Mix Specifications

SMA type “V” and “E” mixes shall be subjected to and shall conform with the performance test requirements noted in Table 15. SMA type “E” mixes shall be subjected to the additional temperature test requirements noted in Table 18.

The SMA-E10 and SMA-E14 mixes shall conform to the Dynamic Modulus and Fatigue testing requirements noted in Table 20 (EME Performance Criteria).

A mix design is required for each SMA mix. The mix design document should clearly document the process followed to meet the desired SMA characteristics.

4.2.3. Enrobé à Module Élevé (EME) Asphalt Mixes

EME mix design are to be conducted in accordance with the guidelines set out in Sabita Manual 33 “Interim design procedure for high modulus asphalt”.

EME mixes are required for two NMPS:-

- 14mm
- 20mm

Performance criteria should conform to the requirements for a Class 2 EME as depicted in Table 20.

Property	Test	Method	Requirement (Class 2)
Workability ¹	Gyratory compactor (angle 1.25°), air voids after 45 gyrations	ASTM D6926	≤ 6%
Durability	Modified Lottmann, TSR	ASTM D4867	≥ 0.80
Resistance to permanent deformation	RSST-CH, 55°C, 5000 reps	ASTM T320	≤ 1.1% strain
Dynamic Modulus	Dynamic modulus at 10 Hz, 15°C	ASTM TP62	> 16 GPa
Fatigue	Beam fatigue test at 10 Hz, 10°C, to 50% stiffness reduction Strain levels 200, 400, 600µε	ASTM T321	≥ 1x10 ⁶ reps @ 260 µε

Table 20 EME Performance Criteria

EME type “E” mixes shall further be subjected to and shall conform with the performance test requirements for Stiffness (dynamic modulus), Permanent Deformation and Fatigue noted in Table 15 with the additional temperature test requirements noted in Table 18.

A mix design is required for each EME mix. The mix design document should clearly document the process followed to meet the desired EME characteristics.

4.2.4. Warm Mix Asphalt

Should a Warm Mix Asphalt be used in the mix, the mix design shall incorporate the use of such a technology/additive in the mix design process. Any consequential deviations from the guidelines set out in Sabita Manual 35 “Design and use of asphalt in road pavements – Appendix B”, Sabita Manual 33 “Interim design procedure for high modulus asphalt” or standard industry practice shall be brought to the attention of the Roads Provision Department and shall be documented in the mix design report.

4.2.5. Mix Design Approval

No mixes may be supplied without approval of the mix design by the Senior Manager : Pavement & Geotechnical Engineering, Roads Provision Department.

The contractor shall label every mix design with a unique identification number to facilitate traceability of mixes using the mix design.

4.2.5.1. Mix Design Approval Process

The contractor shall submit his proposed mix design to the Roads Provision Department for acceptance of the mix design at least 2 weeks prior to initial supply of any particular mix.

Upon request by the Roads Provision Department, the contractor shall also supply samples of raw materials. The minimum sample sizes shall be 50 kg for each aggregate type/size and 5 litres of bitumen/binder. The contractor shall also supply any other relevant information as may be requested.

Once satisfied with the content of the mix design, the Senior Manager : Pavement & Geotechnical Engineering (or his nominee) will give signed approval for the mix.

4.2.6. Mix Design Review

Every mix design is to be reviewed at least annually. The review should include verification of the asphalt mix through testing of at least the following characteristics:-

- Binder compliance with SANS 4001-BT1
- Modified binder compliance with TG1
- Binder classification in terms of the SA PG Binder Classification System
- Aggregate and filler compliance with Table 2
- Aggregate BRD, ARD and water absorption
- Mix BRD (@ N_{design}) and MTRD
- Particular mix type characteristics
 - Sand skeleton mixes
 - Level I design mix volumetric and performance characteristics
 - All requirements in Tables 11, 12 and 13 (as applicable) at the appropriate compaction (Table 10 for Level I designs and Table 14 for Level II and III designs).
 - Level II design mix performance characteristics (Table 15)
 - Workability
 - Durability
 - Level III design mix performance characteristics (Table 15)
 - Workability
 - Durability
 - SMA mixes
 - All requirements in Table 19
 - SMA mix performance characteristics (Table 15)
 - Durability
 - EME mixes
 - Mix performance characteristics (Table 20)
 - Workability
 - Durability

Should the binder, aggregate or mix characteristics of any particular mix differ significantly from the characteristics obtained in the initial mix design, then the mix shall be re-designed to meet the relevant volumetric and performance characteristics. In the event of a dispute over the significance of a particular characteristic, the contractor shall undertake the appropriate performance test to prove compliance with the specification.

5. ASPHALT PRODUCTION

5.1. Mixing Plant

Asphalt shall be manufactured through a batch-mixing or drum-mixing plant (approved by the Roads Provision Department) such that the requirements of this specification can be met in full. The plant shall be operated and kept in a well maintained condition as directed by the Quality Management System. Records of such maintenance shall be made available on request.

All cold aggregates shall be stockpiled in a manner that precludes the possibility of aggregate contamination. At the very least aggregate stockpiles shall be physically separated on concrete slabs. Undue wetting/saturation of (particularly fine) aggregates shall also be prevented through covering (particularly fine) aggregate stockpiles with reinforced waterproof covers at all times when mixing is not in progress. Natural sand aggregates shall be pre-screened through a 13 mm screen before being fed into the cold feed hoppers.

Sufficient binder storage tanks shall be provided to ensure that adequate reserves are maintained for each binder type held without risk of contamination of binders. Binder storage tanks shall be heated in such a manner that the binder is not degraded during heating. The tanks shall also incorporate a circulating system for the binder.

The plant control panel shall enable the plant operator to have simultaneous view of the critical components of the plant inclusive of :-

- Binder storage temperature
- Cold hopper feed settings
- Hot aggregate bin masses (as appropriate)
- Binder feed rate
- Plant speed (as appropriate)
- Mixing temperature

The plant and its operation shall also conform to the requirements of the following legislation:-

- Occupational Health and Safety Act
- National Environmental Management : Air Quality Act

5.2. Quality Control

The quality of mix produced shall be monitored as directed in the contractor's Quality Management System. The asphalt mix constituents (i.e. binder and aggregates), and the asphalt mix produced shall be checked for compliance and consistency on a regular bases through routine process control testing. The results of such testing shall be available for review by the Roads Provision Department at all times.

5.2.1. Quality Management System

The Quality Management System (QMS) should include documentation outlining the asphalt mix design process, the annual mix review process and processes pertaining to delivery of the asphalt mix.

The QMS shall also include any agreed frequency of split sampling of either raw mix constituents or asphalt mixes (prepared as agreed) with the Roads Provision Department. Such samples are to be delivered to the eThekweni Municipality's Bitumen and Asphalt Laboratory located at the Roads Provision Asphalt Plant in uMhlathuzana Road. All samples shall be adequately and uniquely labeled so that the location of any related mix is readily traceable.

The QMS shall also document the processes to be followed whenever a deviation from specifications is identified. The Contractor shall provide full rectification of any work undertaken with such asphalt mix or materials.

Where applicable, testing is to be conducted using the SANS 3001 series of test methods.

The plant laboratory should be SANAS accredited for the tests undertaken. However, should the laboratory not be SANAS accredited, the Roads Provision Department will need to approve the laboratory for any test result to be considered valid.

In line with these processes, the QMS should include as a minimum per mix design, the material characterisation tests included in Table 21.

Quality Control Tests			Minimum Test Frequency
Binder	Penetration		Every batch delivered
	Softening Point		Every batch delivered
	SA PG Binder Classification		1 per 6 months
Aggregate	Coarse Aggregate	Aggregate Grading	Every batch delivered
		Flakiness Index (Max.)	1 per month
		Aggregates BRD, ARD and Water Absorption	1 per month
		ACV, 10%FACT	1 per month
		Polished Stone Value (Coarse Aggregates)	1 every year per stone type and source
	Fine Aggregate	Aggregate Grading	Every batch delivered
		Aggregates BRD, ARD and Water Absorption	1 per month
		Sand Equivalent (Fine Aggregates)	Every batch delivered
		Methylene Blue Adsorption Value	1 per month
Asphalt Mix	Temperature of Mix	In the truck at the exit weighbridge	Every load
		In the truck at the point of delivery	Every load
	Bitumen Content		1 test per 200 tons of output or part thereof per day
	Extracted Mix Aggregate Grading Analysis		1 test per 200 tons of output or part thereof per day
	Voids Analysis (Bulk Relative Density and Maximum Theoretical Relative Density)		1 test per 200 tons of output or part thereof per day

Table 21 Test Frequencies**5.2.2. Process Control**

The mix temperature of the mix taken in the truck at the exit to the plant shall not exceed the value stated in the mix design. Furthermore, the temperature of the mix taken in the truck on delivery shall not be less than the value stated in the mix design.

Quality checks on mix production will be based on the Job Mix Formula (JMF) for the approved mix design. Tolerances on variation from the JMF are given in Table 22.

			Permissible Deviation from JMF (%)	
			Individual Results	Average of 3 Consecutive Results
Aggregate Fraction - Grading	Sieve Size (mm)	28	± 5.0	± 3.0
		20	± 5.0	± 3.0
		14	± 5.0	± 3.0
		10	± 5.0	± 3.0
		7.1	± 5.0	± 3.0
		5	± 4.0	± 2.5
		2	± 4.0	± 2.5
		1	± 4.0	± 2.5
		0.6	± 4.0	± 2.5
		0.3	± 3.0	± 2.0
		0.15	± 2.0	± 1.5
		0.075	± 1.0	± 1.0
Voids in the Mix (@ design compaction)			± 1.5	± 1.0
Binder Content			± 0.3	± 0.2

Table 22 Mix Production Property Limits

All process control testing undertaken by the contractor shall be signed off by the responsible person identified in the QMS and shall be made available to the Roads Provision Department.

- All process control test results shall be referenced back to the unique Mix Design reference number.
- Mix extraction gradings shall be made available within 48 hours of the asphalt being manufactured.
- Binder content and void content shall be made available by 08:00am on the day following manufacture of the asphalt.

Should the test results not be provided as required or should the results fall outside the applicable specifications, the Roads Provision Department reserves the right to suspend any supply until the results are produced and the mix is accepted.

The Contractor shall be responsible for rectification of any work completed (or partially completed) with asphalt mix that does not meet the specification to the satisfaction of the Roads Provision Department. The processes related to the rectification of such work shall be outlined in the QMS.

i. Acceptance Testing

After reviewing the results of the process control testing, the Roads Provision Department may elect to conduct their own testing of the binder, aggregates or asphalt mix produced. A copy of test results will be submitted to the Contractor as soon as they are available.

Should the acceptance tests indicate that the mix (or any part thereof) is not to specification, the cost of any re-test by the Council shall be to the Contractor's account and shall be deducted from any payments owed to the Contractor.

ii. On Site Mix Problems

The contractor shall also make himself available on site should the workability and compaction of the mix during the paving/laying operation be problematic in order to assist in trouble-shooting the cause of such problems. If the root cause of the problem is related to the asphalt mix design, the contractor shall re-evaluate his mix design to correct such issues and re-submit his mix design for approval.

PS.EF KERBS AND HAUNCHES**INDEX**

PS.EF.1	EXCAVATION FOR KERB AND CHANNEL / FILLET / FIG.12 EDGE RESTRAINT IN EXISTING GRADED STONE LAYER
PS.EF.2	BARRIER AND MOUNTABLE KERB AND CHANNEL / FILLET
PS.EF.3	ADDITIONAL CONCRETE TO KERB FOUNDATION
PS.EF.4	EXCAVATION FOR KERB AND CHANNEL / FILLET IN EXISTING ASPHALT LAYERS
PS.EF.5	SAW CUT EXISTING ROAD EDGE

PS.EF.1 EXCAVATION FOR KERB AND CHANNEL / FILLET / FIG.12 EDGE RESTRAINT IN EXISTING GRADED STONE LAYER

The unit of measurement shall be the cubic metre (m³). The rate shall include all the materials, labour and plant necessary to scabble the existing G2 Graded Crushed Stone layer the width of the kerb base to be laid, the excavating, loading and transporting of the surplus material to stockpile. The payment depth shall be 50mm.

Over excavation is likely to occur and this is to be made up in mortar (3 sand, 1 cement). Further to the above, the rate tendered shall include for all additional mortar required to make up the over excavated areas.

PS.EF.2 BARRIER AND MOUNTABLE / KERB AND CHANNEL / FILLET

All barrier and mountable kerbing are to be constructed in accordance with Details as per the contract drawings C3.4.1. Concrete cubes 6 No. shall be produced for each pour of concrete for strength determination at 7 days and at 28 days. Care shall be taken in making the cubes to specification. Cubes shall be properly referenced and allowed to cure in water prior to delivery to laboratory for crushing.

PS.EF.3 ADDITIONAL CONCRETE TO KERB FOUNDATION

The rates tendered for kerbs Type A and B shall be based on the minimum dimensions indicated on Standard Drawing no. 47929. Where the asphalt layers necessitate an increase in the kerb foundation thickness, the supply of this additional concrete shall be paid for separately. The unit of measurement shall be the cubic metre (m³) and shall cover the supply and placing of the concrete, compaction and any formwork that may be required.

PS.EF.4 EXCAVATION FOR KERB AND FILLET / FIG .12 EDGE RESTRAINT IN EXISTING ASPHALT LAYERS

The unit of measurement shall be the cubic metre (m³). The rate shall include all the materials, labour and plant necessary to cut two parallel joints in the existing asphalt, the width of the kerb base to be laid, the excavating, loading and transporting of surplus material to the approved tip. Saw cutting, if necessary, shall be measured separately.

PS.EF.5 SAW CUT EXISTING ROAD EDGE

The saw cut shall be cut with a diamond cutter to a neat uniform line 50mm deep and 100mm offset from the edge of the existing road, or as directed by the Engineer. The unit of measurement shall be the linear metre (m) and the rate shall cover the overall depth of the cut.

PS. S REINSTATEMENT**INDEX**

- PS.S.1 REINSTATEMENT OF EXISTING FENCES STORED ON SITE
PS.S.2 REPAIRS TO EXISTING FENCES STORED ON SITE
PS.S.3 REPLACEMENT OF DAMAGED FENCES TO MATCH EXISTING ON SITE

PS.S.1 REINSTATEMENT OF EXISTING FENCES STORED ON SITE

The Contractor's rate shall include for all plant, labour, materials and setting out necessary for the reinstatement of existing fences stored on site . The unit of measurement shall be linear meter (m).

Fence damaged by the Contractor on site must be replaced to match the existing on site.

PS.S.2 REPAIRS TO EXISTING FENCES STORED ON SITE

The Contractor's rate shall include for all plant, labour, transportation, supply of materials and fittings necessary for the repairs to existing fences stored on site. The unit of measurement shall be linear meter (m).

PS.S.3 SUPPLY NEW FENCE AND POST TO REPLACEMENT OF DAMAGED FENCES TO MATCH EXISTING ON SITE

The Contractor's rate shall include for the supply and delivery, plant, labour, materials setting out and fittings necessary for the replacement of damaged fences and posts stored on site. The unit of measurement shall be linear meter (m).

PS.EH STEEL GUARD RAILS**INDEX**

PS.EH.1 STEEL GUARD RAILS
PS.EH.8.1(e) REFLECTIVE PLATES

PS.EH.1 STEEL GUARD RAILS

Where required by the Engineer, steel guard rails shall be installed in accordance with the details on standard drawing No. 38580.

The unit of measurement shall be linear metre (m), and the rate shall include for the excavation for the post base, the disposal of surplus material to tip, setting in concrete, backfilling.

PS.EH.8.1 (e) REFLECTIVE PLATES

The rate shall cover the cost of supplying all materials and labour required to manufacture, paint and fix the reflector plates, as specified in the project specification or shown on the drawings.

PS. EL DUMPROCK SUBGRADE IMPROVEMENT**INDEX**PS.EL.1 DUMPROCK

PS.EL.1 DUMPROCK

Dumprock as defined below is to be used as sub-grade improvement at the discretion of the Engineer after assessment of the prevailing ground conditions. The unit of measurement shall be cubic meter (m3) linear meter,

Clause EL.3 shall be amended to read as follows:

The dumprock shall consist of fresh to slightly weathered ungraded waste rock from mining activities, blasting or rock excavation. Shales, slates or other laminated mud rocks shall not be accepted.

Dumprock shall have a maximum size not more than two thirds of the compacted thickness of the layer. The rock shall otherwise be ungraded but shall contain less than 10% passing the 37,5 mm sieve when spread on site.

Dumprock shall have a minimum 10% FACT value of 100 KN when dry and 40 KN when tested drained after 24 hours soaking.

PS. F PROTECTION WORKS**INDEX**

PS.F.1	TOPSOILING
PS.F.1.1	MATERIALS
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PS.F.2	OVERHAUL
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PS.F.6.6	DRAINAGE GRADE GEOFABRICS
PS.F.7	OPEN CHANNELS AND CHUTES

PS.F.1 TOPSOILING**PS.F.1.1 MATERIALS**

The soil shall be loamy with a well-defined crumb structure, neither too sandy nor too clayey. It shall contain evidence of fibrous plant roots and shall be free from perennial weed root stocks, stone, glass, metallic and plastic substances.

The imported topsoil shall be obtained from a source approved by the Engineer. A sample of the topsoil shall be submitted to a SANAS accredited laboratory for testing as prescribed by the Engineer. Test results are to be forwarded to the Engineer for approval 4 weeks before the topsoiling operation commences.

PS.F.1.2 MEASUREMENT AND PAYMENT

The unit of measurement shall be the square metre (m²). Further to Clause F.8.1 and F.8.2, the rate shall include for the purchase, supply, transport, mixing, distributing, spreading, trimming and finishing of the topsoil and compost mixture.

PS.F.2 OVERHAUL

Notwithstanding the requirements of Clause F.8.1 and Clause F.8.2, no additional payment shall be made for haulage. The rates tendered for items in Part F of the Bill of Quantities shall include the cost of haulage.

PS.F.3 REINSTATEMENT OF FENCE

The unit of measure shall be linear metre (m) and the rate shall include for the re-erection of wire mesh fence between depths 1.5m – 2m previously stored on site.

The rate shall also allow for disposal to tip of all excavated material and leaving the area in a tidy and clean condition.

PS.F.4 GABION BOX RETAINING WALL AND MATTRESSES

Materials and construction shall be as is specified in Clause F.5.5 and F.6.3, and measurement and payment as is specified in Clause F.8.6 of the Standard Engineering Specification.

PS.F.4.1 GABION CAGES

Gabion boxes shall consist of double twisted, hexagonal wire mesh of nominal 80mm mesh, with 4,4mm o/d frame wire and 2,7mm o/d mesh wire. Complete with partitions at 1m centres. All wire to be mild steel to SANS 1580 – 1993, zinc coated by hot-dip galvanising to SANS 675 – 1993.

Mattresses shall consist of double twisted, hexagonal wire mesh of nominal 80mm mesh, with 4,0mm o/d frame and 3,5mm o/d mesh wire. Complete with partitions at 1m centres. All wire to be mild steel to SANS 1580 – 1993, zinc coated by hot dip galvanising to SANS 675 – 1993.

Weld mesh box or mattress gabion baskets will not be used.

The construction of gabions shall be labour intensive as the Engineer may instruct.

PS.F.4.2 QUALITY

The stone shall be clean, hard, un-weathered and free from fissures and flaking. It shall have a relative density of 2.65 and should pass the requirements of the standard specification in terms of size, durability and finish.

PS.F.4.3 DRAINAGE GRADE GEOFABRICS

The geofabric to stone bedding must comply with Clause PG.3.8 of Part PG, Non pressure Pipelines and Precast Concrete Culverts

The unit of measurement shall be the square metre (m²). The rate shall include for its supply, laying, joining, cutting and water.

PS.F.5 75 mm DIAMETER P.V.C WEEPHOLES

The unit of measurement shall be number (No.) and the rate shall include for all the materials, labour, tools necessary to construct the weepholes as specified in Clause F.5.6.2. In addition to the no fines concrete blocks, the Contractor shall make allowances for the P.V.C pipe to be filled with a no fines concrete plug.

PS.F.6 GEOLOK BLOCK RETAINING SYSTEM / WALL

The retaining system walls shall be constructed using “Geolok 400” concrete wall units or equivalent approved by the Engineer. The materials required for the full construction of the retaining wall shall comply with the relevant SABS Standards.

The unit of measurement shall be the square meter (m²) of the front vertical face of the earth retaining system placed in position as shown on the drawings. The front vertical face shall be measured from the top of the base to the top of the earth retaining system.

The tendered rate shall include full compensation for procuring, furnishing, transporting, handling and placing all materials and precast concrete blocks, including the specified backfill material between the blocks, and any additional costs required for placing the blocks in position complete as specified.

PS.F.6.1 EXCAVATION FOR GEOLOK RETAINING SYSTEM FOOTING

The unit of measurement shall be the cubic metre (m³) and the rate tendered shall include for all plant or labour required to complete the work.

PS.F.6.2 TYPE "A", "B" AND "C" CONCRETE BASE FOR GEOLOK RETAINING SYSTEM

The various types of concrete bases are applicable relative to the wall height. The base shall be constructed using grade 25/26 concrete.

The unit of measurement shall be the cubic metre(m³) and the rate tendered shall include for all plant, labour and materials required to complete the work.

The tendered rate shall include full compensation for supplying and placing the concrete and constructing the concrete bases, including any formwork which may be necessary, and for all steel reinforcement, complete as specified.

PS.F.6.3 GEOLOK RETAINING SYSTEM

The spacing / placement of the TB500 units shall be such that there is a minimum of eight (8) units to the square metre (m²) to the front surface area of wall. The unit of measurement shall be the square metre (m²) and the rate tendered shall include for all plant, materials and labour required to complete the work.

50mm diameter PVC weepholes are to be built into the wall at 2,5m centres. The pipes are to extend from the back of the sand or stabilized drainage layer behind the wall to the outer face. The unit of measurement shall be number (no) and the rate shall include for materials and labour necessary to install the weepholes.

PS.F.6.4 WEEPHOLES IN GEOLOK RETAINING WALLS

Weepholes consisting of 75mm diameter AC pipes are to be provided at 1250mm centres horizontally and 900mm centres vertically. Weepholes are to be backed by a 300 X 300 X 300 no fines concrete block.

PS.F.6.5 EXCAVATION FOR FOOTING TO GEOLOK RETAINING WALLS

The unit of measurement shall be the cubic metre (m³), and the rate shall include for all materials, plant and labour necessary as specified in Clause DD.5 and DD.8.2

PS.F.6.6 DRAINAGE GRADE GEOFABRICS

The geofabric to stone bedding must comply with Clause PG.3.8 of Part PG; Non pressure Pipelines and Precast Concrete Culverts

The unit of measurement shall be the square metre (m²). The rate shall include for its supply, laying, joining, cutting and water.

PS.F.7 OPEN CHANNELS AND CHUTES

Where indicated by the Engineer or in the drawings, an open channel shall be formed to the detail provided on the drawings. Construction of the channel shall be along the lines described in Clause F.5.4. Tenderers shall note that details of the channel may vary in section and may have either a concrete or grass sod lining.

Where lining is required, the rate tendered for the channel shall, in addition to the items mentioned in Clause F.8.5, include for all materials, labour and plant required to construct the lining as per detail. The construction of chutes shall be labour intensive with use of tools such as shovels, hand floats and trowels, etc as the Engineer may instruct.

PS.PG NON-PRESSURE PIPELINES AND PRECAST CONCRETE CULVERTS**INDEX**

PS.PG.1	PIPELAYING
PS.PG.2	SUBSOIL PIPES
PS.PG.2.1	CONNECTION OF SUBSOIL DRAINS TO EXISTING STORMWATER SYSTEM
PS.PG.2.2	SUBSOIL TERMINATION STUB
PS.PG.2.3	GEOFABRIC BLANKET
PS.PG.2.4	STONE FOR SUBSOIL DRAIN FILTER
PS.PG.2.5	CLEAN COURSE SAND BACKFILL FOR SUBSOIL DRAIN FILTER
PS.PG.2.6	SUBSOIL DRAINS AND OUTLETS

PS.PG.1 PIPELAYING

The unit of measurement shall be linear metres (m). The unit rate for pipelaying shall include for:

1. the supply of all pipes completes with couplings and jointing materials, their inspection, transport and handling.
2. the laying, including curved alignment where specified, jointing, building pipes into manholes, catchpits and through rigid structures, all cutting and wastage of materials; and
3. testing and cleaning of pipelines. A separate item will be provided for water testing of stormwater lines if required.

PS.PG.2 SUBSOIL PIPES

The following clause shall replace Clause PG.3.5.

"These shall be "Netlon" plastic subsoil pipes complying with SABS 791 as amended.

Hole Size	:	5 ∇ 1 mm Diameter
Diameter of Pipe	:	100 ∇ 10 mm.
Pipe Invert	:	25% of the circumference of the pipe is to be free from slots or holes to form an invert to the pipe."

PS.PG.2.1 CONNECTION OF SUBSOIL DRAINS TO EXISTING STORMWATER SYSTEM

Where subsoil pipes require to be built into an existing stormwater inlet / manhole or headwall, the unit of measurement shall be number (No.).

The rate tendered shall include for all labour and materials to construct the connection in accordance with Clause PG.5.5 and for trimming the geofabric at the connection.

PS.PG.2.2 SUBSOIL TERMINATION STUB

The final 1 metre length of the subsoil drain before the manhole/catchpit shall be 100 mm diameter non-perforated U.P.V.C. pipe.

The unit of measurement shall be number (No.). The rate shall include for the supply and laying of the pipe, and for all work necessary to tie into the stormwater manhole/catchpit.

PS.PG.2.3 GEOFABRIC BLANKET

The geofabric shall comply with Clause PG.3.8 and the rate tendered shall include for wrapping the geofabric around either the subsoil pipe, subsoil drain or stone bedding.

PS.PG.2.4 CLEAN COARSE SAND BACKFILL FOR SUBSOIL DRAIN FILTER

The following clause shall replace Clause PG.3.11.

"River sand for subsoil drain filter shall consist of clean river sand conforming to the following grading: -

Sieve size mm	67	475	150	75
% Passing	100	90 -100	0 - 15	0 - 3

and having a Fineness Modulus of 2,0 - 3,5."

PS.PG.2.5 STONE FOR SUBSOIL DRAIN FILTER

The following clause shall replace Clause PG.3.10.

"The stone aggregate used for the subsoil drain filter shall consist of 9,5 mm crushed stone conforming to the following grading:

Sieve size mm	132	95	67	475	236
% Passing	100	85 - 100	0 - 55	0 - 25	0 - 5

PS.PG.2.6 SUBSOIL DRAINS AND OUTLETS

Positions and type of subsoil drains have not been shown on the plan but will be indicated on site by the Engineer.

Subsoil drains shall be Type A, B or C as detailed on the Standard drawing No. 38575.

Subsoil pipes shall be "Geopipe" plastic pipes conforming to SABS 791. The outfall end of each run of subsoil drain shall be built into the nearest inlet / manhole or headwall in accordance with Clause PG 5.5 or into a special outlet structure as detailed on the project drawings and measured under Part PH

PS.PH MANHOLES AND APPURTENANT DRAINAGE WORKS**INDEX**

PS.PH.1	MANHOLES AND INLETS
PS.PH.2	MANHOLES AND APPURTANT WORKS: REVISED DRAWING NUMBERS
PS.PH.3	BRICKS
PS.PH.6	MANHOLES WITH TYPE S1, S2 AND D3 INLET COVERS
PS.PH.7	INLET AND OUTLET HEADWALLS
PS.PH.8	CONSTRUCTION OF MANHOLE / INLET OVER EXISTING STORMWATER PIPE
PS.PH.11	ALTERATIONS TO EXISTING MANHOLES AND STORMWATER INLETS INCLUDING RAISING AND LOWERING THE COVERS
PS.PH.13	INLET AND OUTLET HEADWALLS
PS.PH.15	BRICK HEADWALLS TO DUCTS

PS.PH.1 MANHOLES AND INLETS

Tenderers are to note that manholes and inlets shall be measured according to type and varying depth only. The rate tendered for the manholes/inlets shall include for the different pipe sizes and benching configurations.

The Contractor shall note that the rate for inlets shall include the cost of the graded channel in front of the inlet and / or splay and the cost of the transition kerb and channel upstream and downstream from each inlet. This will not form part of the payment for kerb and channel.

PS.PH.2 MANHOLES AND APPURTANT WORKS: REVISED DRAWING NUMBERS

Clause PH.3.2.1.1 second paragraph is replaced by the following:

Details of the precast concrete components of standard manholes are shown on standard drawing 38570 for both foul water sewers and stormwater drains, 38574 for foul water sewers and 38571 for stormwater drains.

Clause PH.5.1.1 first paragraph

Standard Drawing 21701 is replaced by drawing 38574

PS.PH.3 BRICKS

Clause PH.3.1 paragraph shall be replaced by the following:

“Burnt clay masonry units for foul water and stormwater sewer manholes, stormwater inlets and inspection chambers shall be Non-Facing Extra (NFX) with a nominal compressive strength of 14 MPa to SABS 227: 1986

PS.PH.6 MANHOLES WITH TYPE S1, S2 AND D3 INLET COVERS

A number of Type "A" and "B" stormwater manholes with various types of inlet covers have been scheduled on this contract. The manholes are schedule by type and in depth increments of 500 mm.

The unit of measurement shall be number (No.) and the tendered rate for each type shall include for the supply of all labour, plant and materials required to construct the manhole complete in accordance with the Standard Drawings and Specification, and inlet type cover as is specified in the contract drawings.

PS.PH.7 INLET AND OUTLET HEADWALLS

Drawing number 38576 shows details of the outlet headwalls. The unit of measurement for these headwalls shall be number (No.) and shall include for all labour, plant and materials required for the construction of the headwalls inclusive of base and cut-off walls.

The construction of the brickwork shall be specified in clause F.5.6.3. Mortar shall conform to Mix A as defined in the latest edition of the Standard Building Regulations.

PS.PH.8 CONSTRUCTION OF MANHOLE / INLET OVER EXISTING STORMWATER PIPE

The unit of measurement shall be Number (No.)

Further to clause PH.8.2 and Ph.8.3 the rate shall include for;

1. Breaking into existing pipe.
2. Cutting and reinstating the ends of the existing pipes
3. The restricted working around the existing pipes
4. Disposal of any spoil etc. ...to the tip

PS.PH.11 ALTERATIONS TO EXISTING MANHOLES AND STORMWATER INCLUDING RAISING AND LOWERING THE COVERS

Alterations to stormwater structures for this contract may be divided into two categories:

1. Where the cover is to be raised / lowered and set back less than 300mm.
2. Where the cover is to be raised/ lowered and set back a distance of more than 300mm but less than 800m

In (I) above, the contractor shall be required to demolish a portion of the stormwater structure and corbel the brickwork to support the cover in its new position.

In (II) above, the Contractor shall be required to demolish a portion of the stormwater structure, cast an extension to the base, slabs as required and re-do the brickwork to support the cover in its new position. Details of this work are shown on Drawing No. 38573.

PS.PH.13 INLET AND OUTLET HEADWALLS

Drawing number 38576 shows details of outlet headwalls. The unit of measure for these headwalls shall be Number (No.) and shall include for all labour, plant and materials required for the construction of the headwall inclusive of the base and cut-off walls.

The construction of brickwork shall be as specified in Clause F.5.6.3. Mortar shall conform to mix Class A as defined in the latest edition of the Standard Building Regulations

PS.PH.15 BRICK HEADWALLS TO DUCTS

Ducts shall have brick headwalls constructed at each end of the ducts, as shown on standard Drawing No. 38581. Bricks for these headwalls shall be Non-Facing Extra (NFX) with a nominal compressive strength of 14 MPa to S.A.B.S. 227:1986. Construction of brickwork shall be as specified in clause F.5.6.3. Mortar shall conform to mix Class A as defined in the latest edition of the Standard Building Regulations.

PS.TA ROAD SIGNS**INDEX**

PS.TA.1	GENERAL
PS.TA.2	ROAD SIGN BOARDS
PS.TA.3	RE-ERECT ROAD SIGNS
PS.TA.4	TEMPORARY ROAD SIGNS
PS.TA.4.1	MATERIALS
PS.TA.4.2	ERECTION
PS.TA.5	TIMBER POSTS
PS.TA.6	DRUMS
PS.TA.7	PROTECTION AND MAINTENANCE
PS.TA.8	GALVANISED STEEL SUPPORT

PS.TA.1 GENERAL

The Tenderer shall make allowance in the time related rates under Section 1.AB in the Bill of Quantities rates, repositioning, covering/uncovering, relocating or removing temporary signs and other forms of road furniture as required during the progress of the works.

PS.TA.2 ROAD SIGN BOARDS

Further to Item TA.8.1, tenderers are to note that the signs measured under this item are the various type of standard regulatory signs (e.g. stop, yield, keep left etc.).

Notwithstanding the requirements of Clause TA.8.1 the unit of measure shall be number (No.).

With the exception of signs R1, R2, R3, R1.5A and R1.5B, the temporary road signs shall be in accordance with the colour code for temporary road signs.

PS.TA.3 RE-ERECT ROAD SIGNS

The unit of measurement is number (No.) which shall consist of one pole and one sign.

The rate shall cover the cost of collecting the pole and sign from the site yard and planning of the pole in the PVC sign sleeve or ground, together with compacting the soil around the pole.

PS.TA.4 TEMPORARY ROAD SIGNS**PS.TA.4.1 MATERIALS**

All temporary shall be manufactured from Chromadek steel plate as detailed under the Clause TA.3.3 and retroreflective material as follows :

Black	Semi –Matte Finish
Yellow	Background Class I (With no Red Material)
Yellow	Background Class II (if red Material Used)
Red	Class I

With the exception of signs R1, R2, R3, R1.5A and R1.5B, the temporary road signs shall be in accordance

with the colour code for temporary road signs.

PS.TA.4.2 ERECTION

The temporary road signs shall be erected in a manner such that the face of the sign is not defaced, obscured or deflected in any way.

Where necessary, for high visibility, the temporary signs shall be erected on 100mm creosoted gum posts such that the underside of the signs is not less than 2.2m above the ground level. The post/s shall be supported in a drum/s which shall be ballasted and braced or stayed so that the sign cannot be blown away. In all other instances, the temporary signs shall be adequately secure to a drum.

PS.TA.3 TIMBER POSTS

The timber posts for the temporary sign supports shall be 100 mm diameter creosote gum posts.

PS.TA.3 DRUMS

All drums shall be white painted, 200 litre drums or similar approved by the Engineer. Drums shall not be used for delineation purposes.

PS.TA.4 PROTECTION AND MAINTENANCE

The Contractor shall protect and maintain all road furniture (road signs, delineators, drums, barriers, barricades etc.) throughout the course of the contract and shall be responsible for the cost of replacing any road furniture that may be damaged or stolen.

PS.TA.5 GALVANISED STEEL SUPPORT

The unit of measurement of steel support shall be in metres (m).

The Tender rates shall include full compensation of manufacturing, delivering to site and erecting.

PS.TB ROAD MARKING**INDEX**

PS.TB.1	PLASTIC ROAD MARKING MATERIAL
PS.TB.2	LETTERING, SYMBOLS AND TRAFFIC ISLAND MARKING
PS.TB.3	TEMPORARY ROADMARKING
PS.TB.4	PAINTED ROAD LINES
PS.TB.5	SANDBLASTING

PS.TB.1 PLASTIC ROAD MARKING MATERIAL

Further to Clause TB.3.1(c) the plastic road marking material shall comply with the requirements of Specification BS.3262, 1987 Part 3.

- (a) The material shall consist of a light-coloured aggregate, pigment and extender, bound together with a thermoplastic resin, plasticised as necessary. The approximate composition of the material as laid is dependent on the appropriate specification, but for example shall be:

Aggregate	40 parts
Solid Glass Beads	20 parts
Pigment and Extender	20 parts
Binder	20 parts

The proportioning of the various ingredients shall be such that the material, when in a molten state, can be sprayed readily onto the road surface to give an even line of good definition.

- (b) Aggregate

The aggregate shall consist of white silica sand, crushed calcite calcined flint, quartz, or other approved aggregate.

- (c) Reflectorisation

The solid glass beads incorporated in the mixture shall comply with the Class A category of BS 6088 (1981), that is: Sieve % Retained

0,18 mm	0 - 3
0,850 mm	5 - 20
0,425 mm	65 - 95
Below 0,425 mm	0 – 10

Minimum of spherical beads by number 70%

- (d) Luminance

The luminance factor of white SPRAYPLASTIC shall be not less than 70.

- (e) Flow resistance

The percentage decrease in the height of the cone of SPRAYPLASTIC shall not be more than 25 after testing for 48 hours at 23 C (temperate grade) or 40 C (semitropical or tropical grades).

- (f) Low Temperature Impact Resistance

SPRAYPLASTIC shall pass the impact test when tested at -10 C (temperate grade) or -1 C (semi-tropical or tropical grades).

- (g) Abrasion resistance

The abrasive wear of SPRAYPLASTIC shall typically be less than 0,5 g per 100 revolutions.

PS.TB.2 LETTERING, SYMBOLS AND TRAFFIC ISLAND MARKING

Notwithstanding the requirements of Clause TB.8.1.2, traffic island marking shall be measured under Clause TB.8.1.1 lines.

PS.TB.4 PAINTED ROAD LINES

The unit of measurement shall be the metre (m). Separate items will be scheduled for each specified width, type of material, and colour of line and the quantity paid for shall be the actual length of line painted in accordance with the instructions of the Engineer, excluding the length of gaps in broken lines.

The rates shall include for procuring and furnishing all material, including the retro-reflective beads in the case of retro-reflective paint, and the necessary equipment, and for painting, protecting and maintenance as specified, including the setting-out and premarking of the lines.

PS.TB.5 SANDBLASTING

An Item has been included in the Bill of quantities for the provision of temporary road marking using P.V.A. paint.

C3.4: PARTICULAR SPECIFICATIONS

In addition to the Standardized and Project Specifications the following Particular Specifications / Policies shall apply to this contract:

- C3.4.1 Part AH - OSHA 1993 Safety Specification
(26 Pages)

- C3.4.2 Standard Environmental Management Plan for Civil Engineering Construction Works
(24 Pages)

C3.5: CONTRACT AND STANDARD DRAWINGS

C3.5.1 CONTRACT DRAWINGS / DETAILS

3. Layout Plan
4. Long Section
5. Cross Section Detail

C3.5.2 STANDARD DRAWINGS

The Standard Drawings to which these Standard Engineering Specifications refer are listed below.

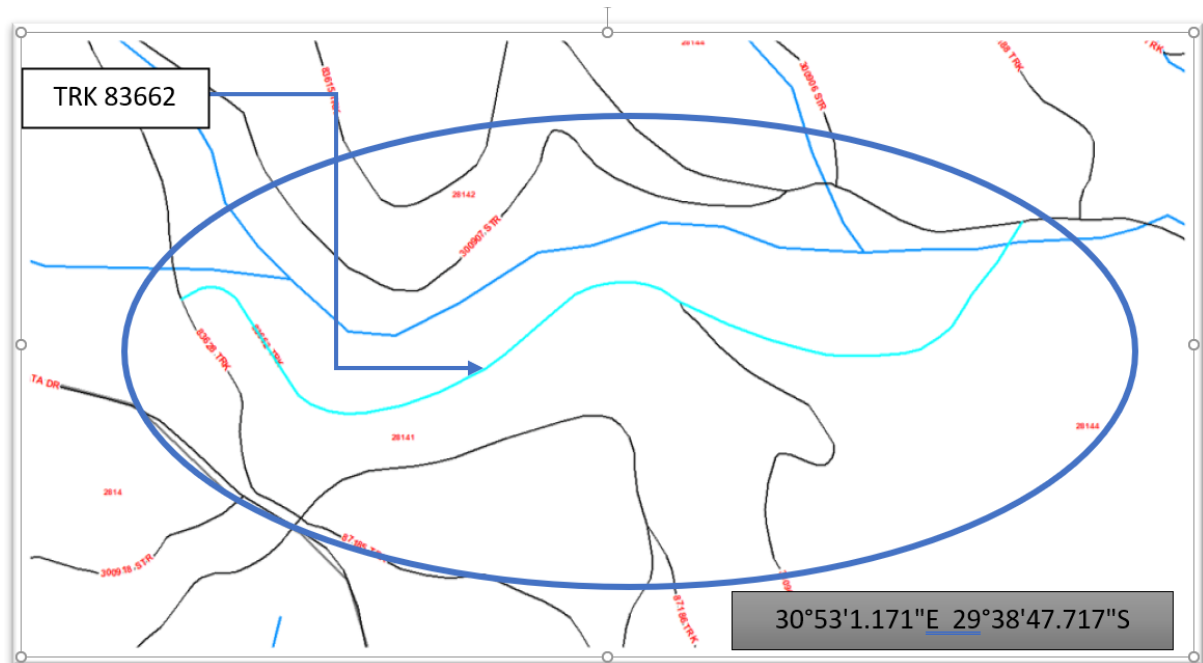
Dwg No	Description	Date of Issue	
38570	Ring Manholes	February	1990
38571	Brick Manhole Details	February	1990
38572	Stormwater Inlet Details	February	1990
38573	Stormwater Inlet Special Details	February	1990
38574	Sewer Manholes: Ramp, Backdrop and Channelling Details	February	1990
38575	Sub-Soil Drain, 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
38585	Water Connections, Pipework and Fittings	February	1990

C3.6: ANNEXURES

C3.6.1 **Insert as required or “There are no Annexures”**

PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN



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.