



CLUSTER
Trading Services

UNIT
Electricity

DEPARTMENT
HV Operations

PROCUREMENT DOCUMENT
INFRASTRUCTURE

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

Contract No: 27636-5E

Contract Title: Refurbishment of various 275 kV and 132 kV overhead transmission lines and substation related assets on an as-and-when required basis during a 24-month period

Est. CIDB Grade/ Class: 7 EP

CLARIFICATION MEETING AND QUERIES

Clarification Meeting: Compulsory Clarification Meeting

Meeting Location, Date, Time: Compulsory Clarification Meeting: eThekweni Electricity's Training Centre, 17 Supply Road, Springfield, Durban on [23 January 2024] at [10h00]

Queries can be addressed to: Mr Thokozani Kunene
The Employer's Agent's Representative: Tel: 031-322-1060
eMail: Thokozani.kunene@durban.gov.za. All email queries to be submitted by 01 February 2024 and consolidated questions and answers to be uploaded on the website on 08 February 2024.

TENDER SUBMISSION

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

Closing Date/ Time: Friday, 16 February 2024 at 11h00

FACSIMILE, eMAIL, or POSTED TENDERS WILL NOT BE ACCEPTED

Issued by:

ETHEKWINI MUNICIPALITY

Deputy Head: HV Operations

Date of Issue: 14/12/2023

Document Version 24/02/2023(c)

FOR OFFICIAL USE ONLY

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 supply, delivery, and erection/ installation/ construction of materials for the maintenance and repair of various 275 kV and 132 kV overhead transmission lines and substation related assets on an as-and-when required basis during a 24-month period.

Subject	Description	Tender Data Ref.
Employer	The Employer is the eThekweni Municipality as represented by: Deputy Head: HV Operations	F.1.1.1
Tender Documents	Documents can only be obtained in electronic format, issued by the eThekweni Municipality. Documentation can be downloaded from the National Treasury's eTenders website or the eThekweni Municipality's Website . The <u>entire document</u> should be printed (on A4 paper) and suitably bound by the tenderer.	F.1.2
Eligibility	It is <u>estimated</u> that tenderers should have a CIDB contractor grading designation of 7 EP (or higher). The CIDB provisions in relation to a Contractor's Potentially Emerging (PE) status <u>do not</u> apply.	F.2.1.1
Clarification Meeting	Compulsory Clarification Meeting: eThekweni Electricity's Training Centre, 17 Supply Road, Springfield, Durban on [23 January 2024] at [10h00]	F.2.7
Seek Clarification	Queries relating to these documents are to be addressed to the Employer's Agent's Representative whose contact details are: Mr Thokozani Kunene Tel: 031-322-1060 eMail: Thokozani.kunene@durban.gov.za. All email queries to be submitted by 01 February 2024 and consolidated questions and answers to be uploaded on the website on 08 February 2024. All queries are to be submitted via email by 24 November 2023 . These will be consolidated, and clarifications will be posted on eTenders/ Municipality website for the benefit of all Bidders by 1 December 2023 .	F.2.8
Submitting a Tender Offer	Tender offers shall be delivered to: The Tender Box in the foyer of the Municipal Building 166 KE Masinga Road, Durban	F.2.13
Closing Time	Tender offers shall be delivered on or before Friday, 16 February 2024 at or before 11h00 .	F.2.15
Evaluation of Tender Offers	Either the 80/20 or 90/10 Price Preference Point System, as specified in the PPPFA Regulations 2022 will be applied in the evaluation of tenders. Refer to Clause F.3.11 of the Tender Data for the Specific Goal(s) for the awarding of Preference Points, and other related evaluation requirements.	F.3.11
Requirements for sealing, addressing, delivery, opening and assessment of tenders are further stated in the Tender Data		

PART T1: TENDERING PROCEDURES

T1.2: TENDER DATA

T1.2.1 STANDARD CONDITIONS OF TENDER

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

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

T1.2.2 TENDER DATA

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

F.1: GENERAL

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

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

- 1) This procurement document.
- 2) "General Conditions of Contract for Construction Works – 3rd Edition 2015" issued by the South African Institution of Civil Engineering (GCC 2015). This document is obtainable separately, and Tenderers shall obtain their own copies.
- 3) **Standard Technical Specifications and Instructions listed in Section C3.3 and attached at the end of the tender document.**
- 4) **Particular Specifications and related documents listed in Section C3.4 and attached at the end of the tender document.**
- 5) In addition, Tenderers are advised, in their own interest, to obtain their own copies of the following acts, regulations, and standards referred to in this document as they are essential for the Tenderer to get acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and the participation of targeted enterprise and labour.
 - The Employer's current (as at advertising date) Supply Chain Management Policy.
 - The Preferential Procurement Policy Framework Act No. 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations (2022).
 - The Occupational Health and Safety Act No. 85 and Amendment Act No. 181 of 1993, and the Construction Regulations (2014).
 - The Construction Industry Development Board Act No. 38 of 2000 and the Regulations issued in terms of the Act (July 2013).
 - SANS 1921:2004 – Construction and Management Requirements for Works Contract, Parts 1-3.

- Any other eThekweni Municipality Policy documents referenced in the Tender Documents.

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

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

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

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

Mr Thokozani Kunene

Tel: 031-322-1060

eMail: Thokozani.kunene@durban.gov.za. All email queries to be submitted by 01 February 2024 and consolidated questions and answers to be uploaded on the website on 08 February 2024.

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

F.1.6 Procurement procedures: Price and Preference with Functionality.

F.2: TENDERER'S OBLIGATIONS

F.2.1 Eligibility: General

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

- (a) The Tenderer does not comply with the legal requirements as stated in the Employer's current SCM Policy.
- (b) The Tenderer cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.
- (c) In the event of a Compulsory Clarification Meeting:
 - i) the Tenderer fails to attend the Compulsory Clarification Meeting.
 - ii) the Tenderer fails to have form "T2.2.2: Certificate of Attendance at Clarification Meeting / Site Inspection" signed by the Employer's Agent or his representative.
- (d) In the case of JV submissions, two or more JV entities have common directors / shareholders or common entities tendering for the same works.
- (e) At the time of closing of tenders, the Tenderer is not registered on the National Treasury Central Supplier Database (CSD) as a service provider. In the case of a Joint Venture, this requirement will apply individually to each party in the Joint Venture.
- (f) The tenderer has not submitted, with this tender, a valid Letter of Good Standing from the Compensation Commissioner as proof of being registered and in good standing with the compensation fund. Reference is to be made to Returnable Document T2.2.13.

- (g) The tender fails to complete and sign the Declaration of Municipal Fees in T2.2: "Returnable Documents" and submits the required documentation. Reference is to be made to Returnable Document T2.2.12.

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

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

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

The following are to be noted:

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

F.2.1.1 Eligibility: CIDB

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

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

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

"Documents are to be obtained, free of charge, in electronic format, from the **National Treasury's eTenders website** and/ or the **eThekweni Municipality's Website**. The entire electronically downloaded document should be printed on white A4 paper (single-sided) and suitably bound by the tenderer."

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

"Addenda will be published, in electronic format, on the websites specified in F.1.2. Tenderers are to ensure that the eTenders website is consulted for any published addenda pertaining to this tender up to three days before the tender closing time as stated in the Tender Data."

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

F.2.7 Clarification meeting:

Compulsory Clarification Meeting: eThekweni Electricity's Training Centre, 17 Supply Road, Springfield, Durban on [23 January 2024] at [10h00]

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

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

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

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

- Contract No. : **27636-5E**
- Contract Title : **Refurbishment of various 275 kV and 132 kV overhead transmission lines and substation related assets on an as-and-when required basis during a 24-month period**

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

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

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

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

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

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

- Date : **Friday, 16 February 2024**
- Time : **11h00**

F.2.16 Tender offer validity: The Tender Offer validity period is 120 Days from the closing date for submission of tenders.

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

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

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

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

Tax Clearance

Reference is also to be made to returnable form T2.2.3: "Tax Compliance Status PIN/ Tax Clearance Certificate".

SARS has introduced a new Tax Compliance Status System. Tenderers must submit a **Tax Compliance Status PIN** (TCS PIN) instead of an original Tax Clearance Certificate. This TCS PIN can be used by third parties to certify the taxpayer's real-time compliance status. This TCS PIN is to be entered on Returnable Document T2.2.1: "Compulsory Enterprise Questionnaire". Separate Tax Clearance Certificates / TCS PINs are required for each entity in a Joint Venture.

Failure to comply will make the tender non-responsive.

Compensation Commissioner

Reference is also to be made to returnable form T2.2.13: "Eligibility: Registration with Compensation Commissioner".

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

Failure to comply will make the tender non-responsive.

Central Supplier Database (CSD)

Reference is also to be made to returnable form T2.2.14: "Eligibility: CSD Registration Report".

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

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

CIDB Registration

Reference is also to be made to returnable form T2.2.15: "Eligibility: Verification of CIDB Registration and Status".

Registration with the CIDB must be reflected as "Active" at time of tender closing.

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

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

The date of obtaining the CIDB printout(s) is to be indicated on the printout.

F.3: THE EMPLOYER'S UNDERTAKINGS

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

F.3.2 Issue addenda: Add the following paragraph:

“Addenda will be published, in electronic format, on the same platform(s) as the Tender Notification (refer to F.1.2).”

F.3.4 Opening of Tender Submissions: Tenders will be opened immediately after the closing time for tenders. The public reading of tenders will take place in the SCM Boardroom, 6th Floor, Engineering Unit Building, 166 KE Masinga Road, Durban.

F.3.11 Evaluation of Tender Offers:

Eligibility

Tenders will be checked for compliance with the ELIGIBILITY requirements, as specified in T1.2.2 Clause F.2.1. Tenderers not in compliance will be deemed non-responsive.

Functionality

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

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

Preference Point System

The procedure for the evaluation of responsive tenders is **PRICE AND PREFERENCE** in accordance with the Employer’s current SCM Policy, the Preferential Procurement Policy Framework Act (5 of 2000), and the Preferential Procurement Policy Framework Act Regulations (2022).

Price Points

It is unclear (at the time of advertising) which of the two preference point systems applies, **90/10** preference point system will apply, determined by the price offered by the lowest acceptable tender.

Preference Points

Reference is also to be made to T2.2.7: "MBD 6.1: Preference Points Claim".

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

• **Ownership Goal**

Goal Weighting: 20%

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	90/10
Race: Black (w1)	Equals 0%	n/a	0
	Between 0% and 51%	n/a	0.25
	Greater or equal to 51% and less than 100%	n/a	0.5
	Equals 100%	n/a	1
Gender: Female (w2)	Equals 0%	n/a	0
	Between 0% and 51%	n/a	0.125
	Greater or equal to 51% and less than 100%	n/a	0.25
	Equals 100%	n/a	0.5
Disabilities (w3)	Equals 0%	n/a	0
	Between 0% and 51%	n/a	0.125
	Greater or equal to 51% and less than 100%	n/a	0.25
	Equals 100%	n/a	0.5
Maximum Goal Points:		n/a	2

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

- w1= 50%, w2= 25%, w3= 0% (where: w1 + w2 + w3 = 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.

• **RDP Goal: The promotion of South African owned enterprises**

Goal Weighting: 20%

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

Location	80/20	90/10
Not in South Africa	n/a	0
South Africa	n/a	0.5
Kwa Zulu Natal	n/a	1
eThekweni Municipality	n/a	2
Maximum Goal Points:	n/a	2

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

- CSD report

• **RDP Goal: Creation of new jobs to address black youth unemployment**

Goal Weighting: 20%

The tendering entity's **Commitment to Appointment or Actual Appointment**, in terms of the categories below, is to be used in the determination of the tenderer's claim for **Preference Points** for this Specific Goal.

Number of jobs created	80/20	90/10
< 2	n/a	0
2 to 10	n/a	0.5
11 to 20	n/a	1
Over 20	n/a	2
Maximum Goal Points:	n/a	2

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

- Commitment letter to appoint youth from local ward (for a year or more)
- Appointment letters signed by local councillor or chief (for a year or more)
- Consider other evidence etc Copies of IDs and proof of address in eThekweni
- The appointment is not restricted to a specific ward because the refurbishment work will take place in any ward within the eThekweni Municipality area of supply

• **RDP Goal: Social Upliftment of communities**

Goal Weighting: 20%

The tendering entity's **Involvement in Corporate Social Investment initiatives**, in terms of the categories below, is to be used in the determination of the tenderer's claim for **Preference Points** for this Specific Goal.

Corporate Social Investment	80/20	90/10
Clean-up campaigns	n/a	0.5
Social upliftment programmes	n/a	0.5
Bursaries	n/a	0.5
Infrastructure repairs and maintenance	n/a	0.5
Maximum Goal Points:	n/a	2

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

- List and value of projects identified through the local councillor/chief in a letter form, (as a percentage of the tendered value)

• **RDP Goal: The promotion SMMEs Black owned – Contracts > R5m**

Goal Weighting: 20%

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

Contract Participation Goal	80/20	90/10
Sub-contracting 0%	n/a	0
Sub-contracting ≤ 10%	n/a	0.5
Sub-contracting > 10% but ≤ 20%	n/a	1
Sub-contracting > 20%	n/a	2
Maximum Goal Points:	n/a	2

Proof of claim as declared on MBD 6.1 (1 or more of the following will be used in verifying the tenderer's status) <ul style="list-style-type: none"> Contract Participation Goal Plan (% work to be allocated)

F.3.13 Acceptance of tender offer:

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

- The tenderer submits a **valid Tax Clearance Certificate OR Tax Compliance Status PIN**, issued by the TCS System of the South African Revenue Services, or has made arrangements to meet outstanding tax obligations.
- The tenderer is **registered, and "Active", with the Construction Industry Development Board**, at time of tender closing, in an appropriate contractor grading designation.
- The tenderer or any of its directors/shareholders is **not listed on the Register of Tender Defaulters** in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.
- The tenderer has not:
 - Abused the Employer's Supply Chain Management System; or
 - Failed to perform on any previous contract and has been given a written notice to this effect.
- The tenderer has completed the **Compulsory Enterprise Questionnaire** and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process.
- The tenderer is **registered and in good standing with the compensation fund or with a licensed compensation insurer**.
- The Employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the **necessary competencies and resources to carry out the work safely**.

The Municipality does not bind itself to accept the lowest or any tender. It reserves the right to accept the whole or any part of a tender to place orders. Bidders shall not bind the Municipality to any minimum quantity per order. The successful Tenderer (s) shall be bound to provide any quantities stipulated in the specification.

It is the intention of the Employer to accept two (2) technically and contractually compliant offers.

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

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

F.3.17 Copies of contract: The number of paper copies of the signed contract to be provided by the Employer is **ONE (1)**.

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

T1.2.3 ADDITIONAL CONDITIONS OF TENDER

T1.2.3.1 Appeals

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

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

T1.2.3.2 Prohibition on awards to persons in the service of the state

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

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

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

T1.2.3.3 Code of Conduct and Local Labour

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

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

T1.2.3.4 Targeted Procurement

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

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

Refer to **Economic Empowerment Framework**.

T1.2.3.5 Functionality Specification

The following data (F.3.11.9) is used by HV Operations/ HV Lines Branch.

The value of W_2 is 100. The Functionality criteria (and sub criteria if applicable) and maximum score in respect of each of the criteria are as follows:

Functionality Criteria / Sub Criteria	Maximum Points Score
Experience of tenderer	35
Number and competency of personnel	45
Construction approach, methodology and quality control	10
Construction equipment	10
Maximum possible score for Functionality (M_s)	100

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

Functionality shall be scored by not less than three evaluators and the scores of each of the evaluators will be averaged, weighted, and then totalled to obtain the final score for Functionality. Each evaluation criteria will be assessed in terms of six indicators and scores allocated according to the following table:

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

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

Functionality Criteria	Returnable Schedules
Tenderer's experience	<ul style="list-style-type: none"> Experience of Tenderer
Number and competency of personnel	<ul style="list-style-type: none"> Key Personnel Experience of Key Personnel
Construction approach, methodology and quality control	<ul style="list-style-type: none"> Construction Approach, Methodology and Quality Control
Construction equipment	<ul style="list-style-type: none"> Construction Equipment

Unless otherwise stated, evaluation criteria will be adjudicated with respect to the contract specific Scope of Work, as specified in C3. In this regard the following definitions apply to the evaluation criteria prompts for judgement:

- **“successfully completed”** implies a project has been completed on time and to specification;
- **“similar nature”**:
 - Implies refurbishment (maintenance and repair) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components.
 - Consideration is also given for comparable projects such as refurbishment (surface preparation, painting and structural repairs) of industrial steel structures being at least partially bolted, where both manual climbing and rope access is used for the working at heights.

- Work executed within the last 15 years.
- Work having the main scope of work in terms of technical requirements and operations that are comparable to that specified in this tender enquiry. Comparable work shall include:
 - (a) Working at heights more than 20 m above ground level.
 - (b) Use of fall arrest system.
 - (c) Combination of manual climbing of structures and use of rope access.
 - (d) Preparing metal surface using sandpaper, wire-brush, hand power tools, grit-blasting.
 - (e) Painting with 2-part paints using roller and hand brush (not spray-painting).
- The combined value of these projects or sub-projects is at least R15 m, including VAT. If a portion of the project was executed (for example as a sub-contractor), only that portion of the project value for the specific lines would be considered in the total value.
- **“experience”** implies experience on projects of a similar nature.
- **“accredited degree / diploma”** implies a minimum 3 year qualification within the built environment, from a registered University or Institute of Technology.

Criterion: Tenderer’s Experience	
Note: Projects of a similar nature will be considered.	
Level 0	No information provided; OR submission of no substance / irrelevant information provided.
Level 1	To have successfully completed <u>at least 6 projects</u> of a similar nature within the past 15 years.
Level 2	To have successfully completed <u>at least 8 projects</u> of a similar nature within the past 15 years.
Level 3	To have successfully completed <u>at least 10 projects</u> of a similar nature within the past 15 years.
Level 4	To have successfully completed <u>at least 12 projects</u> of a similar nature within the past 15 years, and <u>at least 5 projects</u> shall include concrete foundation repairs and steel and fastener replacement.
Level 5	To have successfully completed: <ul style="list-style-type: none"> - at least <u>14 projects</u> of a similar nature within the past 15 years, - <u>and at least 4 of these projects</u> being high voltage (88 kV and above) double circuit steel lattice tower refurbishment projects, which shall include concrete foundation repairs and steel and fastener replacement.

Criterion: Number of Key Personnel				
Item	Category of Resource	Number of Persons for Evaluation	Evaluation points per resource	Total evaluation points
1	Construction Manager	1	8.0	8.0
2	Construction Supervisor- Trade Tested (Electrical)	2	4.0	8.0
3	Assistant Construction Supervisor	2	3.0	6.0
4	Inspector	1	3.0	3.0
5	Erector (for steel and fastener and tower accessories repair/ replacement)	2	2.0	4.0
6	Abrasive blaster	4	2.0	8.0
7	Painter	4	2.0	8.0
	TOTAL			45.0

Criterion: Competency of Key Personnel	
Level	CONSTRUCTION MANAGER
0	No information provided OR submission of no substance / irrelevant information provided OR not meeting Level 1 to 5 requirements.
1	Education/ Qualification to have at least a 3-year tertiary qualification (Electrical, Mechanical or Civil Engineering) and registered or eligible for registration with relevant statutory body, i.e., SACPCMP or ECSA, AND Experience relevant to the scope of work in this contract of at least 3 years of on-site management of high voltage (88 kV and/or higher) power line refurbishment/ upgrade/ rebuild/ construction projects.
2	Same education/qualification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 4 years on site management of high voltage (88 kV and/or higher) power line refurbishment/ upgrade/ rebuild/ construction projects.
3	Same education/qualification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 5 years on site management of high voltage (88 kV and/or higher) power line refurbishment/ upgrade/ rebuild/ construction projects.
4	Same education/qualification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 6 years on site management of high voltage (88 kV and/or higher) power line refurbishment/ upgrade/ rebuild/ construction projects.
5	Same education/qualification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 7 years on site management of high voltage (88 kV and/or higher) power line refurbishment/ upgrade/ rebuild/ construction projects, AND Experience relevant to the scope of work in this contract of at least 2 years on double circuit steel lattice tower refurbishment/ upgrade/ rebuild/ construction projects.

Criterion: Competency of Key Personnel	
Level	CONSTRUCTION SUPERVISOR
0	No information provided OR submission of no substance / irrelevant information provided OR not meeting Level 1 to 5 requirements.
1	Education/Qualification to have at least passed Grade 10 and to be a Trade Tested Artisan (Electrical) recognized by the relevant statutory body in South Africa, AND Training and Certification as a surface preparation and painting supervisor (as per the Painting Specification), and for working at heights using manual Fall Arrest System such as climbing towers and/or other similar structures, AND Experience relevant to the scope of work in this contract of at least 3 years of on-site supervision and execution of work involving the refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components.
2	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 4 years of on-site supervision and execution of work involving the refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components.
3	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 5 years of on-site supervision and execution of work involving the refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components.
4	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 6 years of on-site supervision and execution of work involving the refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components.
5	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 7 years of on-site supervision and execution of work involving the refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components, AND Experience relevant to the scope of work in this contract of at least 2 years on double circuit steel lattice tower refurbishment/ upgrade/ rebuild/ construction projects.

Criterion: Competency of Key Personnel	
Level	ASSISTANT CONSTRUCTION SUPERVISOR
0	No information provided OR submission of no substance / irrelevant information provided OR not meeting Level 1 to 5 requirements.
1	Education/Qualification to have: (1) at least passed Grade 12 or (2) at least passed Grade 10 and have a built-environmental technical qualification or certification. AND Training and Certification as a surface preparation and painting supervisor (as per the Painting Specification), and for working at heights using manual Fall Arrest System such as climbing towers and/or other similar structures, AND Experience relevant to the scope of work in this contract of at least 3 years of on-site supervision and execution of work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.
2	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 4 years of on-site supervision and execution of work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.
3	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 5 years of on-site supervision and execution of work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.
4	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 6 years of on-site supervision and execution of work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.
5	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 7 years of on-site supervision and execution of work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted. AND Experience relevant to the scope of work in this contract of at least 2 years on double circuit steel lattice tower refurbishment/ upgrade/ rebuild/ construction projects.

Criterion: Competency of Key Personnel	
Level	INSPECTOR
0	No information provided OR submission of no substance / irrelevant information provided OR not meeting Level 1 to 5 requirements.
1	<p>Education/Qualification to have:</p> <p>(1) at least passed Grade 12 or</p> <p>(2) at least passed Grade 10 and have a Trade Test (Electrical) qualification.</p> <p>AND</p> <p>Training and Certification as a coating inspector (as per Painting Specification), and for working at heights using manual Fall Arrest System such as climbing towers and/or other similar structures,</p> <p>AND</p> <p>Experience relevant to the scope of work in this contract of at least 3 years of on-site monitoring and inspection work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.</p>
2	<p>Same education/qualification and training and certification as per "Level 1" rating,</p> <p>AND</p> <p>Experience relevant to the scope of work in this contract of at least 4 years of on-site monitoring and inspection work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.</p>
3	<p>Same education/qualification and training and certification as per "Level 1" rating,</p> <p>AND</p> <p>Experience relevant to the scope of work in this contract of at least 5 years of on-site monitoring and inspection work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.</p>
4	<p>Same education/qualification and training and certification as per "Level 1" rating,</p> <p>AND</p> <p>Experience relevant to the scope of work in this contract of at least 6 years of on-site monitoring and inspection work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.</p>
5	<p>Same education/qualification and training and certification as per "Level 1" rating,</p> <p>AND</p> <p>Experience relevant to the scope of work in this contract of at least 7 years of on-site monitoring and inspection work involving refurbishment (preparation, painting, and structural repairs) of high voltage (88 kV and above) steel lattice overhead transmission line structures and associated components and/or industrial steel structures being at least partially bolted.</p> <p>AND</p> <p>Experience relevant to the scope of work in this contract of at least 2 years on double circuit steel lattice tower refurbishment projects.</p>

Criterion: Competency of Key Personnel	
Level	ERECTOR (Tower Erector, Iron Worker, Steel Erector)
0	No information provided OR submission of no substance / irrelevant information provided OR not meeting Level 1 to 5 requirements.
1	Education/Qualification to have successfully passed Grade 6 or Adult Basic Education and Training (ABET), AND Training and Certification for erector work and working at heights using manual Fall Arrest System such as climbing towers and/or other similar structures, AND Experience relevant to the scope of work in this contract of at least 2 years in refurbishment/ upgrade/ repair/ construction of high voltage (88 kV and above) steel lattice overhead transmission line structures, and/or industrial steel structures being at least partially bolted, and work at heights at least more than 20 m using fall arrest system (harness and lanyard).
2	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 3 years in refurbishment/ upgrade/ repair/ construction of high voltage (88 kV and above) steel lattice overhead transmission line structures, and/or industrial steel structures being at least partially bolted, and work at heights at least more than 20 m using fall arrest system (harness and lanyard).
3	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 4 years in refurbishment/ upgrade/ repair/ construction of high voltage (88 kV and above) steel lattice overhead transmission line structures, and/or industrial steel structures being at least partially bolted, and work at heights at least more than 20 m using fall arrest system (harness and lanyard).
4	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 5 years in refurbishment/ upgrade/ repair/ construction of high voltage (88 kV and above) steel lattice overhead transmission line structures, and/or industrial steel structures being at least partially bolted, and work at heights at least more than 20 m using fall arrest system (harness and lanyard).
5	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 6 years in refurbishment/ upgrade/ repair/ construction of high voltage (88 kV and above) steel lattice overhead transmission line structures, and/or industrial steel structures being at least partially bolted., and work at heights at least more than 20 m using fall arrest system (harness and lanyard), AND Experience relevant to the scope of work in this contract of at least 2 years on double circuit steel lattice tower refurbishment/ upgrade/ rebuild/ construction projects.

Criterion: Competency of Key Personnel	
Level	ABRASIVE BLASTER
0	No information provided OR submission of no substance / irrelevant information provided OR not meeting Level 1 to 5 requirements.
1	Education/Qualification to have successfully passed Grade 6 or Adult Basic Education and Training (ABET), AND Training and Certification to perform surface preparation, in particular grit blasting, of steel structures (as per the Painting Specification), and for working at heights using manual Fall Arrest System such as climbing towers and/or other similar structures, AND Experience relevant to the scope of work in this contract of at least 2 years in grit-blasting as part of refurbishment of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
2	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 3 years in grit-blasting as part of refurbishment of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
3	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 4 years in grit-blasting as part of refurbishment of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
4	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 5 years in grit-blasting as part of refurbishment of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
5	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 6 years in grit-blasting as part of refurbishment of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard), AND Experience relevant to the scope of work in this contract of at least 2 years on double circuit steel lattice tower refurbishment projects.

Criterion: Competency of Key Personnel	
Level	PAINTER
0	No information provided OR submission of no substance / irrelevant information provided OR not meeting Level 1 to 5 requirements.
1	Education/Qualification to have successfully passed Grade 6 or Adult Basic Education and Training (ABET), AND Training and Certification to perform surface preparation and painting of steel structures (as per the Painting Specification), and for working at heights using manual Fall Arrest System such as climbing towers and/or other similar structures, AND Experience relevant to the scope of work in this contract of at least 2 years in refurbishment (preparation and painting) of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
2	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 3 years in refurbishment (preparation and painting) of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
3	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 4 years in refurbishment (preparation and painting) of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
4	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 5 years in refurbishment (preparation and painting) of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard).
5	Same education/qualification and training and certification as per "Level 1" rating, AND Experience relevant to the scope of work in this contract of at least 6 years in refurbishment (preparation and painting) of high voltage (88 kV and above) steel lattice overhead transmission line structures and/or industrial steel structures being at least partially bolted, and at heights at least more than 20 m using fall arrest system (harness and lanyard), AND Experience relevant to the scope of work in this contract of at least 2 years on double circuit steel lattice tower refurbishment projects.

Criterion: Construction Methodology & Quality Control		
Item	Description for Tower Refurbishment	Evaluation points
1	Replacement of steel and fasteners on high voltage (88 kV and above) steel lattice structures and/or similar structures.	2.0
2	Abrasive blast cleaning of bolt clusters/ fasteners and steel members on high voltage (88 kV and above) steel lattice structures and/or similar structures, which shall include containment, collection, and removal of spent grit from site.	2.0
3	Surface preparation and painting of high voltage (88 kV and above) steel lattice structures and/or similar structures and related inspections.	2.0
4	Concrete foundation refurbishment which includes concrete repairs, build-up, preparation, and painting.	2.0
5	Tests (Sellotape cleanliness test, Cross-cut and cross-hatch adhesion test, Coating pull-off test, Coating thickness test).	2.0
	TOTAL	10.0

Criterion: Construction Equipment				
Construction Equipment <ul style="list-style-type: none"> Points allocation as per table below and Bidder provides the required details in the Returnable Schedule. Maximum total points = 10. 				
Item	Description of Construction Equipment	Minimum Quantity of Construction Equipment	Evaluation points per item or set	Total evaluation points
1	Compressor for blast-cleaning, minimum 290 cfm	3	1	3
2	Blast-cleaning equipment (4 guns per set) and painting equipment	3 sets	1	3
3	Test instruments comprising of pull-off tester, surface profile gauge, cross-cut tester, cross-hatch tester and coating thickness gauge	1 set	2	2
4	Vehicle set:			2
	(1) LDV- 2x4- at least 5-person seating capacity	2	0.25	
	(2) LDV 4x4- at least 5-person seating capacity	2	0.25	
	(3) Construction vehicle, capacity up to 10 persons, off-road capable	1	0.50	
	(4) Crane truck at least up to 5-ton capacity	1	0.50	

Technical Assessment of Key Personnel:

The key personnel of the top ranked responsive Tenderers may be required to attend a compulsory technical assessment during the adjudication. The assessment shall take the form of an oral and/or written test, and a field test. The Tenderer shall be notified of the date and time and venue. The assessment must be attended by the relevant key personnel offered and to be assigned to this contract. The results of the assessment shall be used for the scoring together with the information in the schedules.

PART T2: RETURNABLE DOCUMENTS

T2.1 LIST OF RETURNABLE DOCUMENTS

T2.1.1 General

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

The Tenderer is required to complete every Schedule and Form listed below to the best of their ability as the evaluation of tenders and the eventual contract will be based on the information provided by the Tenderer. Failure of a Tenderer to complete the Schedules and Forms to the satisfaction of the Employer will inevitably prejudice the tender and may lead to rejection on the grounds that the tender is non-responsive.

T2.1.2 Returnable Schedules, Forms and Certificates

Entity Specific

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T2.2.5	MBD 4: Declaration of Interest	32
T2.2.6	MBD 5: Declaration for Procurement Above R10 Million	34
T2.2.7	MBD 6.1: Preference Points Claim Form ITO the Preferential Regulations	35
T2.2.8	MBD 8: Declaration of Bidder's Past SCM Practices	38
T2.2.9	MBD 9: Certificate of Independent Bid Determination	40
T2.2.10	Joint Venture Agreements (if applicable)	43
T2.2.11	Record of Addenda to Tender Documents (if applicable)	44

Eligibility

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Technical or Functionality Evaluation

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T2.2.17	Key Personnel	51
T2.2.18	Construction Approach, Methodology, and Quality Control	54
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T2.2.20	Construction Equipment	56
T2.2.21	Contractor's Health and Safety Plan	57
T2.2.22	Refurbishment Programme Requirements	58
T2.2.23	Technical Details of Materials, Equipment and Services	60

T2.2 RETURNABLE SCHEDULES, FORMS, AND CERTIFICATES

The returnable schedules, forms, and certificates, as listed in T2.1.2, can be found on pages [26](#) to [61](#).

NOTE

The **Form of Offer** (C1.1.1), The **Data to be Provided by Contractor** (C1.2.2.2), **Bill of Quantities** (C2.2), **Rate of Exchange Declaration** (C2.3), and **Contract Price Adjustment Schedule** (C2.4) are also required to be completed and submitted by the tenderer.

T2.2.1 **COMPULSORY ENTERPRISE QUESTIONNAIRE**

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

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

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

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

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

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

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

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

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

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

- authorizes the Employer to verify the tenderers tax clearance status from the South African Revenue Services that it is in order.
- 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.
- 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.
- 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.
- confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

NAME (Block Capitals):

Date

SIGNATURE:

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

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

This is to certify that:

(Tenderer name):

of (address):

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

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

Particulars of person(s) attending the meeting:

Name: Name:

Signature: Signature:

Capacity: Capacity:

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

Name:

Signature:

Date:

T2.2.3 TAX COMPLIANCE STATUS PIN / TAX CLEARANCE CERTIFICATE

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

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

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

The TCS PIN(s) are to be entered under item 3.4 on form **T2.2.1: Compulsory Enterprise Questionnaire**.

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

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.4 CONTRACTOR'S HEALTH AND SAFETY DECLARATION

If Functionality is applicable as part of tender evaluation, reference is to be made to Clause F.3.11.9 of the Conditions of Tender.

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 manager and supervisor as defined in Regulation 8, and competent persons as defined in Regulations 9, 10, 11, 12, 13, 14, 16, 17, 20, 21, 22, 23(1), 24, 25, 26, 27, 28 and 29, as applicable).

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

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

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

- (i) By whom will training be provided?
(ii) When will training be undertaken?
(iii) Positions to be filled by persons to be trained or hired:

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

Name of proposed subcontractor:

Qualifications or details of competency of the subcontractor:

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.5 **MBD 4: DECLARATION OF INTEREST**

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

- (a) a member of:
 - (i) any municipal council.
 - (ii) any provincial legislature.
 - (iii) the national Assembly or the national Council of provinces.
- (b) a member of the board of directors of any municipal enterprise.
- (c) an official of any municipality or municipal enterprise.
- (d) an employee of any national or provincial department, national or provincial public enterprise or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999).
- (e) a member of the accounting authority of any national or provincial public enterprise.
- (f) an employee of Parliament or a provincial legislature.

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

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

3.1 Name of enterprise	Complete T2.2.1 Item 1.1
3.2 Name and ID of enterprise’s representative	Complete T2.2.1 Items 1.2 and 1.3
3.3 Position enterprise’s representative occupies in the enterprise	Complete T2.2.1 Item 1.4
3.4 Company Registration number	Complete T2.2.1 Item 3.1 or 3.2
3.5 Tax Reference number	Complete T2.2.1 Item 3.3
3.6 VAT registration number	Complete T2.2.1 Item 1.7
3.7 The names of all directors / trustees / shareholders / members / sole proprietors / partners in partnerships, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below. In the case of a joint venture, information in respect of each partnering enterprise must be completed and submitted.	

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:

.....

<p>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?</p> <p>If yes, furnish particulars:</p> <p>.....</p>	YES	NO
<p>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?</p> <p>If yes, furnish particulars:</p> <p>.....</p>	YES	NO
<p>3.12 Are any of the company's directors, trustees, managers, principal shareholders or stakeholders in service of the state?</p> <p>If yes, furnish particulars:</p> <p>.....</p>	YES	NO
<p>3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principal shareholders, or stakeholders in service of the state?</p> <p>If yes, furnish particulars:</p> <p>.....</p>	YES	NO
<p>3.14 Do you or any of the directors, trustees, managers, principal 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?</p> <p>If yes, furnish particulars:</p> <p>.....</p>	YES	NO

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

Full Name	Identity No.	State Employee No.	Personal income tax No.
Use additional pages if necessary			

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

NAME (Block Capitals):

Date

SIGNATURE:

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

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

		Circle Applicable	
		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.		
4.0	Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	YES	NO
4.1	If YES, provide particulars.		

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

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

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

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

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

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

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

1.0 GENERAL CONDITIONS

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

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

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

1.3 Preference Points for this tender shall be awarded for:

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

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

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

2.0 DEFINITIONS

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

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

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

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

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

3.0 FORMULA FOR CALCULATION OF PREFERENCE PRICE POINTS

3.1 PROCUREMENT OF GOODS AND SERVICES

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

90 / 10 Points System

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

Where:

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

4.0 POINTS AWARDED FOR SPECIFIC GOALS

4.1 In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goal(s) stated in **Table 1** below, as supported by proof/ documentation stated in the **Conditions of Tender**:

4.2 In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of:

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system, or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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

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

The Specific Goals to be allocated points in terms of this tender	Maximum Number of points ALLOCATED (80/20 system)	Maximum Number of points ALLOCATED (90/10 system)	Number of points CLAIMED (80/20 system)	Number of points CLAIMED (90/10 system)
Ownership Goal: Race (black)	n/a	2.0	n/a	
Ownership Goal: Gender (female)	n/a	1.0	n/a	
Ownership Goal: Disabilities	n/a	1.0	n/a	
RDP Goal: The promotion of South African owned enterprises.	n/a	4.0	n/a	
RDP Goal: The creation of new jobs to address black youth unemployment	n/a	4.0	n/a	
RDP Goal: Social upliftment of communities	n/a	4.0	n/a	
RDP Goal: The promotion of SMMEs Black owned (contracts >R5m)	n/a	4.0	n/a	
Total CLAIMED Points (20 /10 Maximum)				

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

I acknowledge that:

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

NAME (Block Capitals):

Date

SIGNATURE:

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

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

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

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

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

- 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.

- 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?

- 4.3.1 If YES, provide particulars.

.....

.....

Circle Applicable	
YES	NO

YES	NO
-----	----

YES	NO
-----	----

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.			
<p>.....</p> <p>.....</p>			
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.			
<p>.....</p> <p>.....</p>			

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 attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

(Bid Number and Description)

in response to the invitation for the bid made by:

(Name of Municipality / Municipal Entity)

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

I certify, on behalf of:

(Name of Bidder)

that:

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.10 JOINT VENTURES AGREEMENTS

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

T2.2.11 RECORD OF ADDENDA TO TENDER DOCUMENTS

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

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

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.12 ELIGIBILITY: DECLARATION OF MUNICIPAL FEES

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

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

.....
(full name of Company / Close Corporation / partnership / sole proprietary/Joint Venture)

(hereinafter referred to as the TENDERER) are, as at the date hereunder, fully paid or an Acknowledgement of Debt has been concluded with the Municipality to pay the said charges in instalments.

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

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

I acknowledge that should the aforesaid Municipal charges fall into arrears, the Municipality may take such remedial action as is required, including termination of any contract, and any payments due to the Contractor by the Municipality shall be first set off against such arrears.

- Where the tenderer's place of business or business interests are outside the jurisdiction of eThekweni municipality, a copy of the accounts/ agreements from the relevant municipality are to be provided.
- Where the tenderer's Municipal Accounts are part of their lease agreement, then a copy of the agreement, or an official letter to that effect, is to be provided.

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

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.13 ELIGIBILITY: REGISTRATION WITH COMPENSATION COMMISSIONER

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

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

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

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

Clause 82: Employer to furnish returns of earnings

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

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

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

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

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

Clause 89: Mandators and contractors

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

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

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

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.14 ELIGIBILITY: CSD REGISTRATION REPORT

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

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

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

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

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

CENTRAL SUPPLIER DATABASE FOR GOVERNMENT

Report Date:

Report Ran By:

CSD REGISTRATION REPORT

SUPPLIER IDENTIFICATION

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

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

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

NAME (Block Capitals):

Date

SIGNATURE:

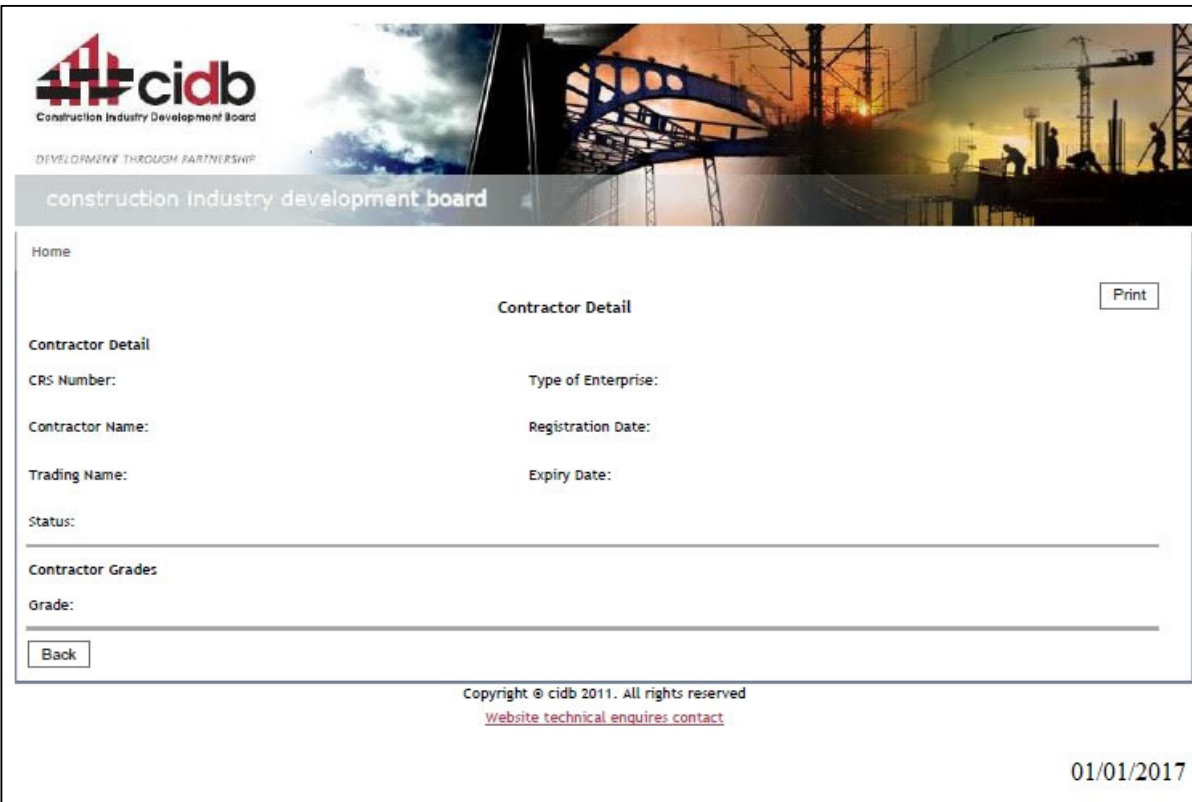
T2.2.15 ELIGIBILITY: VERIFICATION OF CIDB REGISTRATION AND STATUS

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

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

CIDB Registrations can be obtained from the CIDB website at <https://registers.cidb.org.za/PublicContractors/ContractorSearch>. The date of obtaining the printout is to be indicated on the printout.

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



The screenshot shows the CIDB website header with the logo and tagline 'DEVELOPMENT THROUGH PARTNERSHIP'. Below the header is a navigation bar with 'Home' and 'Contractor Detail' (with a 'Print' button). The main content area is titled 'Contractor Detail' and contains the following fields: CRS Number, Contractor Name, Trading Name, Status, Type of Enterprise, Registration Date, Expiry Date, Contractor Grades, and Grade. A 'Back' button is at the bottom left. The footer includes 'Copyright © cidb 2011. All rights reserved', a link for 'Website technical enquires contact', and the date '01/01/2017'.

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

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

NAME (Block Capitals): _____

Date

SIGNATURE: _____

3. Template for Project Details

Details for each of the projects of a similar nature to be considered for evaluation shall be submitted with at least the following information:

1. Project title and client reference number.
2. Client contact details (Client Name, name of person; contact number; email address).
3. Actual start and completion dates.
4. Value of this project as per payment records.
5. Project Details:
 - (1) Asset description.
 - (2) Details of structure where preparation and painting were done.
 - (3) Scope of Work executed by Tenderer.
6. Inspections and conditions assessment:
 - (1) Details of work involving structure climbing and inspection of structure and its degradation.
 - (2) Condition assessment report detailing the inspection, analysis of the findings and schedule (Bill of Materials) for refurbishment.
7. Execution of the work (any type of fixed structure more than 10 m high):
 - (1) List of tools and equipment used to execute the work.
 - (2) Method used for climbing structure.
 - (3) Work force and roles of the Construction Manager, Construction Supervisor and Safety Officer.
 - (4) Details of abrasive grit, cleaning liquids, paint materials used.
 - (5) Method of steel and fastener replacement, surface preparation and painting (indicate brush, roller, spray, etc.), and foundation refurbishment.

Note that spray-painting is not classified as similar work because steel lattice towers shall not be spray-painted.
 - (6) Surface area refurbished, and mass of structure if available.
 - (7) Quality controls- provide details and examples of Inspection Check sheets and Records.
8. Specific details if the work was done on high voltage (88 kV and above) power line steel lattice structures:
 - (1) Single or double circuit structure.
 - (2) For double circuit structures, status of the circuit, such as one Alive and one de-energised and earthed or both de-energised and earthed.
 - (3) Details of work permits.
9. Details of the similarities between the structure worked on and the high voltage (88 kV and higher) steel lattice structures that are to be refurbished under this contract.

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.17 KEY PERSONNEL

Refer to Clause F.3.11.9 for Functionality Points evaluation prompts (if applicable).

1. Minimum Number of Personnel for Tender Evaluation

The Tenderer shall confirm in the table below the minimum number of key personnel which he intends to utilise for the works. This does not relieve the Contractor of his responsibility to make available sufficient personnel to execute the work within the required durations and to the required quality requirements.

No.	Category of Personnel	Minimum Quantity of Personnel	
		Required	Offered
1	Construction Manager	1	
2	Construction Supervisor- Trade Tested (Electrical)	2	
3	Assistant Construction Supervisor- may or may not be Trade Tested	2	
4	Inspector	1	
5	Erector	2	
6	Abrasive Blaster	4	
7	Painter	4	

2. Quality Assurance Minimum Requirements

The scope of work and nature of the activities requires compliance with various statutory legislation and regulations, in particular the Occupational Health and Safety Act and Regulations, including the Construction Regulations, and eThekweni Electricity's Specifications, Safety Rules and Operating Regulations which requires the Contractor to accept Work Permits in order to work on structures having live and bare high voltage conductors.

To comply with the various statutory legislation, acts and regulations, and thus achieve quality assurance, the projects cannot be executed without certain key management, quality control and supervisory personnel, both in category and numbers. The following minimum personnel achieving at least level 3 of the functional criteria, must therefore be offered, or no points will be issued further for the evaluation of key personnel, and non-attachment of the competency details of these key personnel (CVs) will result in zero points:

- (1) Construction Manager, 1 off.
- (2) Construction Supervisor, 2 off.
- (3) Assistant Construction Supervisor, 2 off.
- (4) Inspector, 1 off.

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:

3. Key Personnel Specific Details

For the tender evaluation, the Tenderer shall provide details of the key personnel as per this table below which he intends to utilise for the Works.

Category of Person	Resource offered		Pairing Resource to jointly meet the minimum requirements as per criteria	
	Initial/s and Surname	ID Number	Initial/s and Surname	ID Number
Construction Manager				
Construction Supervisor-Trade Tested (Electrical)				
Construction Supervisor-Trade Tested (Electrical)				
Assistant Construction Supervisor			N/A	N/A
Assistant Construction Supervisor			N/A	N/A
Inspector			N/A	N/A
Erector			N/A	N/A
Erector			N/A	N/A
Abrasive Blaster			N/A	N/A
Abrasive Blaster			N/A	N/A
Abrasive Blaster			N/A	N/A
Abrasive Blaster			N/A	N/A
Painter			N/A	N/A
Painter			N/A	N/A
Painter			N/A	N/A
Painter			N/A	N/A

Note:

(1) Pairing of resources to cater for compliance with the minimum requirements

In instances where a Tenderer/ Contractor does not have one or more resources that comply with the specified requirements (as per Clause F.3.11.9 in the Conditions of Tender), pairing of resources shall be allowed, both for the tender evaluation process and execution of work. When pairing is applied, the first resource shall be the one that partially meets the resource requirements of this tender/ contract and fully meets minimum OHS Act requirements. The second resource shall then be the one that pairs with the first and provides compliance for any other requirement to make them jointly compliant. The paired resources will be required to perform the work jointly without additional cost to the Employer, until such time that one of them complies fully with the requirements. For work using Daywork rates, the cost to the Employer shall be for only one resource within the pair because the deficiency is on the part of the Tenderer/ Contractor.

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:

4. Competency details of key personnel

Refer to Clause F.3.11.9 for Functionality Points evaluation prompts (if applicable).

1. The competency (which includes experience) of assigned staff members in relation to the scope of work in this tender enquiry will be evaluated with consideration of the level of education, qualification, training, skills and experience of the Assigned Staff in the specific sector, field, subject, etc, which is directly linked to the scope of work.
2. **Comprehensive CVs, compiled by the Tenderer, of not more than 4 pages, shall be compiled and submitted specifically in the required format for this tender, for each key personnel, including paired personnel as follows:**
 - (1) Construction Manager x 1.
 - (2) Construction Supervisor (Electrical trade tested) x 2.
 - (3) Assistant Construction Supervisor x 2.
 - (4) Inspector x 1.
 - (5) Erector x 2.
 - (6) Abrasive Blaster x 4.
 - (7) Painter x 4.

Each CV should be structured under the following headings or very similar:

- (1) Personal particulars
 - Full name.
 - Identity number.
 - Date and place of birth.
 - Country of permanent residency.
- (2) Education and Qualification:
 - Highest primary/ secondary education achieved, institute and dates achieved.
 - Relevant tertiary education /qualification achieved, institute and dates achieved.
 - Technical qualification, such as Electrical Trade Test, recognised by a national body.
 - Professional registration details, including registration number and relevant institute.
- (3) Training:
 - Training courses relevant to scope of work in this tender enquiry, such as General Paint Supervisor course, Working at Heights, etc.
- (4) Career/ Experience Summary relevant to the scope of work in this tender enquiry:
 - For each period/ position/ experience, indicate the date/ period, Employer name, Position held, Outline of the role/ experience, List of key responsibilities.
 - Provide details of at least 3 projects where the scope of work was of a similar nature to that in this enquiry, to confirm relevant experience.
 - Key Achievements (optional).

The tenderer must attach the CVs and the relevant certificates (education/ qualification/ training) to this schedule.

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.18 CONSTRUCTION APPROACH, METHODOLOGY, AND QUALITY CONTROL

Refer to Clause F.3.11.9 for Functionality Points evaluation prompts (if applicable).

1. Construction Method Statements

The construction approaches and methodologies must respond to the scope of work and outline the proposed approaches, in the form of method statements, to undertake the work, including health and safety aspects, the use of construction equipment and resources for this project.

Submission of a generic quality management statement on its own without copies of useable method statements shall not be sufficient to achieve evaluation points.

2. Quality Control Documentation

The quality control documentation must discuss what inspections, tests and other control measures are to be employed on site to attain the specified results and is to cover the program associated activities. Submit samples of signed quality inspection test sheets used on similar work done, at least 2 per type of work, as confirmation of experience in the work tendered for.

Submission of a generic quality management statement on its own without copies of actual quality inspection sheets/ forms shall not be sufficient to achieve evaluation points.

The tenderer must attach Method Statements and Quality Control Documentation to this page.

3. Method Statements (MS) and Quality Control (QC) Documents Required for Evaluation

Item	Description of Method Statement (MS) and Quality Control (QC) Documents	MS and QC Documents	
		Required	Provided
1	Replacement of steel and fasteners on high voltage (88 kV and above) steel lattice structures and/or similar structures.	Yes	
2	Abrasive blast cleaning of bolt clusters/ fasteners and steel members on high voltage (88 kV and above) steel lattice structures and/or similar structures, which shall include containment, collection, and removal of spent grit from site.	Yes	
3	Surface preparation and painting of high voltage (88 kV and above) steel lattice structures and/or similar structures and related inspections.	Yes	
4	Concrete foundation refurbishment which includes concrete repairs, build-up, preparation and painting.	Yes	
5	Testing:		
	(1) Sellotape cleanliness test.	Yes	
	(2) Cross-cut and cross-hatch adhesion test.	Yes	
	(3) Coating pull-off test.	Yes	
	(4) Coating thickness test during the various stages of the refurbishment process.	Yes	

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.19 SCHEDULE OF PROPOSED SUBCONTRACTORS

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

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

Attach additional pages if more space is required

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.20 CONSTRUCTION EQUIPMENT

Refer to Clause F.3.11.9 for Functionality Points evaluation prompts (if applicable).

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

The Employer reserves the right to inspect the equipment during the bid evaluation process.

Item	DESCRIPTION (type, size, capacity etc.)	Per Specification		MAKE AND MODEL	YEAR OF MANUF.
		Required Qty	Offered Qty		
1	Compressor for blast-cleaning, minimum 290 cfm:				
	(1) Compressor 1	1			
	(2) Compressor 2	1			
	(3) Compressor 3	1			
2	Blast-cleaning equipment (4 guns per set) and painting equipment				
	(1) Blast cleaning equip. set 1	1			
	(2) Blast cleaning equip. set 2	1			
	(3) Blast cleaning equip. set 3	1			
3	Test instruments comprising of pull-off tester, surface profile gauge, cross-cut tester, cross-hatch tester and DFT gauge	1 set		Indicate details below for pull-off tester	
4	Motor Vehicles:				
	(1a) LDV, 2×4, at least 5-person seating capacity	1			
	(1b) LDV, 2×4, at least 5-person seating capacity	1			
	(2a) LDV, 4×4, at least 5-person seating capacity	1			
	(2b) LDV, 4×4, at least 5-person seating capacity	1			
	(3) Construction vehicle, capacity up to 10 persons, off-road capable	1			
	(4) Crane truck at least up to 5-ton capacity	1			

Attach calibration certificates of test instruments.

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

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.21 CONTRACTOR'S HEALTH AND SAFETY PLAN

Refer to Clause F.3.11.9 for Functionality Points evaluation prompts (if applicable).

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

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

The detailed safety plan will take into consideration the site-specific risks as mentioned under **C3.2: Project Specification**. A generic plan will not be acceptable.

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.22 REFURBISHMENT PROGRAMME REQUIREMENTS

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

Item	Description	Unit of Measure	Period in Weeks	
			Required	Offered
1.	Construction Manager and Safety File: Period from the date on which the contract is awarded.			
1.1	Appointment of Construction Manager.	week	2	
1.2	Health and safety file.	week	3	
1.3	Safe work procedures, method statements, quality inspection and test plans (QITPs), including hazard identification and risk assessments.	week	3	
2.	Mobilisation of Resources and Inspections: Period from the date on which the Contractor is issued with work for a particular line to the date on which the following will be actioned/ completed/ submitted by the Contractor.			
2.1	Inspection/ testing forms/ templates for approval prior to commencement of inspection/ testing.	week	1	
2.2	Tools/ equipment that will be used for the inspections and/ or testing.	week	2	
2.3	Commencement of inspections- for steel replacement, structure cleaning and painting, and foundation refurbishment.	week	2	
2.4	Compile and submit inspection reports in stages.	week	3	
2.5	Appointment of site works personnel for actual refurbishment work.	week	3	
2.6	Training & inductions- (courses: grit-blasting; painting, supervisor, etc).	week	3	
2.7	Order materials (steel, fasteners, paint, etc).	week	3	
2.8	Reference tower- establish and complete with report.	week	4	
2.9	Reference foundation- establish and complete with report.	week	4	

Note:

The programme must be linked to capacity of the Tenderer to execute the work tendered for and the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is listed in **Table (b) of Form “Amendments, Qualifications, and Alternatives”** hereafter and supported by a detailed statement to that effect, all as specified in the Tender Data.

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

NAME (Block Capitals):

Date

SIGNATURE:

Item	Description	Unit of Measure	Quantity	
			Required	Offered
3.	Tower surface preparation and painting			
3.1	Rate of refurbishment of <u>double circuit tower based on preparation and application of 2-coat paint system</u> , with all the blasting and painting teams executing this work, with one circuit Alive when working on the top-half and both circuits Alive when working at the bottom-half. Tower average mass = 10 tonnes (equiv. area = 350 m ²)	Area per month in m ²	1575	
3.2	Rate of refurbishment of <u>double circuit tower based on preparation and application of 3-coat paint system</u> , with all the blasting and painting teams executing this work, with one circuit Alive when working on the top-half and both circuits Alive when working at the bottom-half. Tower average mass = 10 tonnes (equiv. area = 350 m ²)	Area per month in m ²	1225	
4.	Foundation refurbishment (excludes earthing)			
	Note: - there are 4 foundations per single tower. - all of the items below to be executed concurrently. - the quantities for items (a) to (d) are based on averages.			
	(a) Construct gradient on existing foundation.	Gradients per month	16	
	(b) Build-up cap 0.25 m ² equivalent cross section by 250 mm high using shuttering.	Build-up per month	8	
	(c) Build-up cap 0.5 m ² equivalent cross section by 500 mm high using shuttering.	Build-up per month	4	
	(d) Build-up cap 0.75 m ² equivalent cross section by 1000 mm high using shuttering.	Build-up per month	2	
	TOTAL of all items (a) to (d) to be executed concurrently		30	

Note:

The programme must be linked to capacity of the Tenderer to execute the work tendered for and the completion time as specified in the Contract Data. No other completion time that may be indicated on this programme will be regarded as an alternative offer, unless it is listed in **Table (b) of Form “Amendments, Qualifications, and Alternatives”** hereafter and supported by a detailed statement to that effect, all as specified in the Tender Data.

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.23 TECHNICAL DETAILS OF MATERIALS, EQUIPMENT AND SERVICES

This schedule shall be completed, signed, and returned with bid documents of which it forms part.

1. Details of Steel Members and Fasteners

Item	Description	Required	Offered
1.	Steel members, hot-dip galvanised, grade S355JR	Yes	
2.	Bolts, hot-dip galvanised, grade 6.8	Yes	
3.	Nuts, hot-dip galvanised, grade 6.0	Yes	
4.	Washers, hot-dip galvanised, grade S275JR	Yes	

2. Details of Paint Systems Priced for in the Bill of Quantities (the Price Schedule)

Item	Description from the Painting Specification	Manufacturer	Place of Manufacture
1.	Coating Products for NGPS01 (New hot-dip galvanised steel and fasteners; less than 6 months old).		
2.	Coating Products for WUPS01 (Weathered unpainted steel and fasteners).		
3.	Coating Products for WEPS01 (Weathered epoxy/ urethane painted steel and fasteners).		
4.	Coating Products for WVPS01 (Weathered vinyl/ enamel painted steel and fasteners, and recoating with epoxy/ urethane products).		
5.	Coating Products for Foundation Refurbishment SCPS01 = STUBPS01 + CONPS01, for steel (stub and connected steel/ bolts), and concrete		

3. Earthing Material

Item	Description	Required	Offered
1.	Earth-strap		
1.1	Material of strap	HD galvanized mild steel	
1.2	Cross-section area of strap	40 mm × 3 mm	
1.3	Galvanizing per SANS 121- heavy duty	Yes	
2.	Earth-rod (copper clad steel)		
2.1	Size	M16 x 1.8 m	
2.2	Steel core, minimum strength	600 MPa	
2.3	Copper thickness, minimum	250 µm	
2.4	Copper to be fully bonded with the steel core	Yes	

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

NAME (Block Capitals):

Date

SIGNATURE:

T2.2.23 TECHNICAL DETAILS OF MATERIALS, EQUIPMENT AND SERVICES, contd

4. Health and Safety Measures and Safety Equipment

Item	Description	Required	Offered
1.	Health and Safety Measures as per Health and Safety Specification- provide a breakdown list of all PPE requirements, safety equipment and facilities requirements, training and other health and safety measures required for the project and the costing of such requirements- attach details of funds allocation to this schedule.	Yes	
2.	Proximity tester that is used to determine if the conductor is alive or dead.	Yes	
3.	Portable earths (earthing of 3 phases and earthwire/ OPGW) of adequate cross-sectional area and suitability rated clamps that will safely arrest any fault current and initiate protection, and earth sticks.	Yes	
4.	Fall arrest rescue kit and associated training- at least 1 per team	Yes	

5. Scope of Work Fulfilment

Item	Description	Required	Offered
1.	Undertake refurbishment work as described in Part C: Scope of Work, such as but not limited to: (1) Inspect structures and provide assessment reports. (2) Establish refurbishment references on towers and foundations. (3) Replace steel members and fasteners and step-bolts. (4) Prepare and paint previously unpainted and/or painted structures, top-half, bottom-half or both. (5) Refurbish foundations and stubs. (6) Measure tower footing resistance and earthing improvements. (7) Refurbish jumper connections. (8) Prepare and paint compression dead-end eye and shackle. (9) Prepare and seal the compression dead-end eye and shackle. (10) Install OPGW and earthwire bonding leads and clamps and seal. (11) Replace labels and brackets, anti-climb devices, and bird-guards. (12) Load, transport and offload the dismantled materials as per the Procedure for return of dismantled materials.	Yes	
2.	Undertake Adhoc, Additional, Extra and Emergency work as described in Part C: Scope of Work, such as but not limited to: (1) Modify the anti-climb devices and fit gates. (2) Build retaining walls. (3) Repair major damage to towers. (4) Replace insulators and/or hardware. <i>Note: Where necessary, specialist contractors could be utilised for the work.</i>	Yes	
3.	Undertake work on the top-half and bottom-half of high voltage power line double circuit structures with one circuit Alive, ensuring all necessary precautions are taken.	Yes	
4.	Undertake work on the bottom-half of the high voltage power line double circuit structures with both circuits Alive, ensuring all necessary precautions are taken.	Yes	

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

NAME (Block Capitals):

Date

SIGNATURE:

PART C1: AGREEMENT AND CONTRACT DATA

C1.1: FORM OF OFFER AND ACCEPTANCE

C1.1.1: OFFER

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

Contract No.: **27636-5E**

Contract Title: **Refurbishment of various 275 kV and 132 kV overhead transmission lines and substation related assets on an as-and-when required basis during a 24-month period**

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*) :

C1.1.3: SCHEDULE OF DEVIATIONS

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

- 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.

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 Works are to be completed in portions as set out in the Scope of Work. The time for completion of the portions shall be determined based on the quantity of work and the required rates of refurbishment for the different activities within the Scope of Work. The whole of the Works shall be completed within **24 Months**.

The period as stated in 5.3.2, and the 37 days referred to in 5.3.3, are included in the above time for achieving Practical Completion. The special non-working days as stated in 5.8.1 are excluded from the above time for achieving Practical Completion.

1.1.1.15 The Employer is the eThekweni Municipality as represented by:
Service Unit: **Electricity**
Deputy Head: **HV Operations**

1.2.1.2 The address of the Employer is:
Physical: **1 Jelf Taylor Crescent, Durban, 4001**
Postal: **Electricity Unit, P O Box 147, Durban, 4000**
Telephone: **031 311 9008 (t)**
Fax: **N/A**
E-Mail: **Veer.Ramnarain@durban.gov.za**

1.1.1.16 The **name of the Employer's Agent** is: **Thokozani Kunene**

1.2.1.2 The address of the Employer' Agent is:
Physical: **1 Jelf Taylor Crescent, Durban, 4001**
Postal: **Electricity Unit, P O Box 147, Durban, 4000**
Telephone: **031 322 1060 (t)**
Fax: **N/A**
E-Mail: **Thokozani.Kunene@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 authorize 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 Construction Manager, at least two competent Construction Supervisors, at least 2 competent Assistant Construction Supervisors as part of the key staff for the management, quality control and supervision of the works on site. The Construction Manager, and the two competent Construction Supervisors shall be full-time employees of the Contractor since they are required to take on legal responsibilities and sign work permits on behalf of the Contractor as per the Occupational Health and Safety Act and Regulations and the Employer's Safety Rules and Operating Regulations. It is a requirement for these key persons to have the minimum qualification and experience as per the quality assurance minimum requirements in the Key Personnel returnable schedule. The CVs of these and other key personnel shall be submitted to the Employer's Agent's Representative for acceptance by the Department (reference is made to Clause 5.3.1 of the Contract Data). Key personnel not meeting the minimum requirements shall not be accepted.
- 5.3.1 The **documentation required** before commencement with Works execution are:
- Health and Safety File, which shall include the Health and Safety Plan (refer to Clause 4.3)
 - Initial Programme for issued work (refer to Clause 5.6)
 - Security (refer to Clause 6.2.1)
 - Insurance (refer to Clause 8.6)
 - CVs and Certificates of Key Personnel (refer to Clause 4.11.1)
 - CPG Implementation Plan (if applicable)
- 5.3.2 The **time to submit the documentation** required before commencement with Works is **14 Days**.
- 5.3.3 Add the following paragraph:
- "If a construction work permit, in terms of Clause 3(1) of the Construction Regulations (2014), is applicable, the instruction to commence carrying out of the works may only be issued once the construction work permit has been obtained by the Employer's Agent. If a construction work permit is applicable, the contractor shall allow for a minimum period of 37 days, after the submission (or re-submission) of the documentation referred to in Clause 5.3.1., for the issuing of the construction work permit."
- 5.4.2 The access and possession of Site shall not be exclusive to the Contractor but as set out in the Site Information.
- 5.8.1 The **non-working days** are **Saturdays and** Sundays.
- (5.1.1) The **special non-working** days are:
- All statutory holidays as declared by National or Regional Government.
 - The year-end break:
 - Commencing on the first working day after 15 December.
 - Work resumes on the first working day after 5 January of the next year.
- 5.8.1 Delete the words "sunset and sunrise" and replace with "18:00 and 06:00".
- 5.12.2.2 **Abnormal Climatic Conditions (Rain Delays)** - The number of days per month, on which work is expected not to be possible because 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 because 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.

Month	Days Lost	Average Rainfall
January	4*	134
February	3	113
March	3	120
April	2	73
May	2	59
June	1	38
July	1	39
August	2	62
September	2	73
October	3	98
November	3	108
December	1*	102
TOTAL	27	1019 mm
* = 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 5 000** (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 **5 Years**.

6.2.1 **Security (Performance Guarantee): Nil.**

6.5.1.2.3 The **percentage allowance** to cover overhead charges for daywork are as follows: **15%**

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:**

Add the following:

The options for Contract Price Adjustment are given in Part C2-Pricing Data. The selected option/s indicated on the Contract Price Adjustment Schedule, and the relevant CPA formula and indices shall be applied. Subject to compliance with the instructions given in Part C2-Pricing Data for CPA, the value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule.

6.8.3 Price adjustments for **variation in the cost of the special material(s)** are not allowed.

6.10.1.5 The **percentage advance** on materials (short lead-time < 6 weeks delivery), comprising of complete billable units as per items in the Bill of Quantities) not yet built into the Permanent

Works but manufactured and delivered to the Contractor's storage facility/ camp site located within the eThekweni Municipality region, and inspected by the Employer's Agent or duly appointed Representative is: **0 %**.

The **percentage advance** on materials and/or plant (short lead-time ≥ 6 weeks delivery), comprising of complete billable units as per items in the Bill of Quantities) not yet manufactured and not delivered to the Contractor's storage facility/ camp site: **0 %**.

The **percentage advance** on materials and/or plant (long lead-time ≥ 6 weeks delivery), comprising of complete billable units, payable from provisional sums allocation, not yet built into the Permanent Works but manufactured and delivered to the Contractor's storage facility/ camp site located within the eThekweni Municipality region, and inspected by the Employer's Agent or duly appointed Representative is: **90 %**.

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 **10%** of the Contract Sum.

Should the Contract Price exceed the Contract Sum then the limit of "retention money" is **10%** 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**.

8.6.1.4 **Ground Support Insurance:**

- Minimum amount for any one occurrence, unlimited as to the number of occurrences, against any claim for damages or loss caused by vibration and / or removal of lateral support: **R 2,000,000**.
- Maximum first excess: **R 20,000**.

8.6.1.5 Furthermore, the insurance cover effected by the Contractor shall meet the following requirements:

Third Party Insurance (Public Liability)

- Minimum amount for any one occurrence, unlimited as to the number of occurrences, for the period of the contract, inclusive of the maintenance period: **R 3,000,000**.
- Consequential loss to be covered by policy: **Yes**.
- Liability section of policy to be extended to cover blasting: **Nil**.
- Maximum excess per claim or series of claims arising out of any one occurrence: **R20,000**.

Principal's own surrounding Property Insurance

- Minimum amount for any one occurrence unlimited as to the number of occurrences against any claim for damage which may occur to the Council's own surrounding property: **R 2,000,000**.
- Maximum first excess: **R 20,000**.

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: **R 2,000,000**.
- Minimum amount for transit of materials to site: **R 2,000,000**.

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:

- (1) The hours of work.
- (2) The wage rate of the- as determined by eThekweni Municipality.
- (3) The duration of the appointment.
- (4) 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 Contractor will be reimbursed for the CLO Wage and UIF from the Provisional Sum item in Bill of Quantities, without overhead charges and profit.

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 the eThekweni Municipal region**. The contractor will be required to provide proof of authenticity of local labour. Signed confirmation by the appointed CLO will suffice for this.

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

C1.2.3.3 CONTRACTOR PARTICIPATION GOAL (CPG)

It is a condition of contract that the contractor must allow for a minimum of **30%** of the contract value to be subcontracted to contractors who are **>51% Black** owned. Proof of payment to the subcontractors will be required to verify that the minimum has been achieved.

The qualifying sub-contractor shall be registered or qualify to be registered on the eThekweni Municipality vendor database and National Treasury CSD, be registered and in good standing

with the workmen compensation fund or with a licensed compensation insurer and be permanently based (and with their main office) in the eThekweni Municipality region.

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

C1.2.3.4 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 personnel (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 A: Employed as Local Labour for this contract only Category B: Temporarily employed by the Contractor Category C: Permanently employed by the Contractor				

- Category of Employment

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;

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 employment information has been forwarded to the Employer's Agent's Representative. No additional payment for complying with the above will be made.

C1.2.3.5 PERFORMANCE MONITORING OF SERVICE PROVIDERS

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.

Should the Contractor decide to de-establish and then later re-establish his site camp, this shall be for his own account.

C1.2.3.7 PRICING ASSUMPTIONS AND INSTRUCTIONS

The Clauses in C2.1: Pricing Assumptions and Instructions shall be deemed to be a part of the Conditions of Contract.

C1.2.3.8 SATISFACTORY PERFORMANCE

The Contractor shall employ for the purpose of this contract only such personnel as are careful and competent and the Municipality shall be at liberty to object to and require the Contractor to remove from the job forthwith any person, including supervisory staff, employed by the Contractor who, in the opinion of the Municipality, misconducts himself/herself or is incompetent or negligent in the proper performance of his/her duties and such person shall not again be employed upon this contract without the permission of the Municipality.

C1.2.3.9 QUALITY OF PRODUCTS

No inferior products will be accepted under this contract.

Should there be any cause for complaint against the standard of service or quality of products offered which is not resolved within a period of 10 working days, the Employer reserves the right to cancel the contract after serving one month's notice, in writing, to the Contractor involved. Should such notice be given, the Contractor shall nevertheless be obliged to perform the duties covered by the contract up to the date of expiration of the period of notice.

C1.2.3.10 COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT

This Act replaces the Workmen's Compensation Act.

The Contractor shall, before commencement of work, produce documentary proof to the Employer's Agent that he has complied in all respects with the provisions of the Compensation for Occupational Injuries and Diseases Act. The Contractor undertakes that he/she will perform and comply with all provisions of the Compensation for Occupational Injuries and Diseases Act and more particularly that he/she will render all returns and pay all assessments for which he/she is liable in terms of such Act.

C2.1: PRICING ASSUMPTIONS / INSTRUCTIONS

C2.1.1 GENERAL

- C2.1.1.1 The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents (refer to F.1.2 of the Tender Data).

C2.1.2 QUANTITIES REFLECTED IN THE SCHEDULE

- C2.1.2.1 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.
- C2.1.2.2 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 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.
- C2.1.2.3 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.

C2.1.3 PROVISIONAL SUMS / PRIME COST SUMS

- C2.1.3.1 Where Provisional Sums or Prime Cost sums (PC Sums) 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 done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.
- C2.1.3.2 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.

C2.1.4 PRICING OF THE BILL OF QUANTITIES

- C2.1.4.1 The prices and rates 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.
- C2.1.4.2 Each item shall be priced and extended to the "Total" column by the Tenderer, except for the items for which only rates are required (Rate or Rates Only), or items which already have Prime Cost or Provisional Sums affixed thereto. If the Bidder omits the unit supply or install price for any item which requires these prices in the Bill of Quantities, then the unit price given shall be taken to include the price for supply and install. If the Bidder omits the unit supply and/or install price for any item which requires these prices in the Bill of Quantities which result in there being no unit price for the item, then the bid will be deemed to be non-responsive, irrespective of whether the

quantity for that item is zero or non-zero.

C2.1.4.3 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.

C2.1.4.4 The cost of all tests required in this specification shall be borne by the Tenderer unless specific additional tests are called for by the Employer's Agent.

C2.1.4.5 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.

C2.1.5 "RATE ONLY" ITEMS

C2.1.5.1 The Tenderer shall fill in rates for all items where the words "Rate Only" or "Rates Only" appear in the "Total" column. "Rate Only" or "Rates 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.

C2.1.5.2 For "Rate Only" or "Rates 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.

C2.1.6 RATE OF EXCHANGE VARIATION

C2.1.6.1 Where the goods are imported the Contractor shall within seven days of date of Official Purchase Order, arrange through his bankers for the foreign commitment to be covered forward down to the Rand to fix the rate of exchange. The Contractor shall notify the Municipality as soon as possible thereafter regarding the rate which has been fixed on such forward exchange.

C2.1.6.2 Where the contract is for the supply of an indefinite quantity of goods/services over a fixed period, the requirement to arrange forward cover within 7 days in respect of variations in the rate of exchange shall be applied to the notification of each order rather than notification of acceptance of tender.

C2.1.6.3 Any increase or decrease between the basic rate of exchange as at a date seven days prior to the date of closing of Bids and that existing at the date of establishment of the forward exchange cover within the period stipulated above shall be paid or deducted by the Municipality. Upon the failure of the Contractor to arrange forward exchange cover, the Contractor shall be liable should there be an increase in the basic rate of exchange occurring after the last-mentioned date.

C2.1.6.4 The bank charges incurred in obtaining the forward exchange cover shall be for the Municipality's account.

C2.1.6.5 The Contractor shall:

- (1) submit documentary proof of the exchange,
- (2) when an adjustment is claimed in terms of this sub-clause, whether by the Contractor or the Municipality, submit documentary proof to the satisfaction of the Deputy City Manager: Treasury in respect of such claim.

C2.1.7 FREIGHT, DUTY, AND LANDING CHARGES

- C2.1.7.1 Where the Goods or Materials to be supplied must be imported, the Tenderer shall, notwithstanding anything to the contrary contained in the General Conditions of Contract, base their tender on the duty and landing charges ruling as at the date fourteen days prior to the closing date of tenders and tenderers shall state such freight rates, duty and landing charges in the Tender. No claim by the Contractor for an adjustment will be entertained unless the details required by this Clause are included with their tender.
- C2.1.7.2 Where freight rates actually paid by the Contractor are higher or lower than the rates upon which the contract price was based then any difference between the freight rates upon which the tender was based and the freight rates actually paid by the Contractor shall be paid or deducted by the Municipality, as the case may be.
- C2.1.7.3 Where the rates of duty or landing charges are varied between the date of tender and the date of clearing, any increase or decrease in the rates ruling at the date of tender, shall be paid or deducted by the Municipality.
- C2.1.7.4 The Contractor shall:
- (1) submit documentary proof of the freight rates, duty and landing charges paid by him, and
 - (2) when an adjustment is claimed in terms of this Clause, submit documentary proof to the satisfaction of the Municipality in support of such claim.
- C2.1.7.5 In the absence of such proof, no claim by the Contractor for any increase will be entertained.

C2.1.8 CONTRACT PRICE ADJUSTMENT (CPA)

- C2.1.8.1 The clauses hereinunder shall take precedence over all other clauses with respect to price adjustments.
- C2.1.8.2 CPA may be applied to locally produced goods/ materials. The imported portion of goods and/or material shall not be subject to CPA, except for metal prices, such as for conductors. The CPA for metal prices shall be allowable provided that appropriate industry and intentionally accepted formulae are used. The CPA portion shall only be on the metal portion, and not on any other cost element such as manufacturing/ profit/ overhead. The CPA shall be fixed and firm for each 12-month period in the same way as described for the CPA on local content.
- C2.1.8.3 Where indices are used for CPA, these shall be Statistics SA and/or SEIFSA indices and/or international indices for conductors if so required, with the indices and formula clearly indicated on the CPA returnable schedule.
- C2.1.8.4 CPA formulae shall use indices to 4 decimal places. The percentage increase or decrease shall then be calculated and truncated to 2 decimal places. The rates in the Bill of Quantities shall be multiplied by this CPA percentage figure to give the CPA value truncated to 2 decimal places.
- C2.1.8.5 CPA application options are provided for either the supply or install items or both. The tenderer shall indicate the choice in the **CPA returnable schedule**. The option for Supply rates can be the same or different to that for Install rates. The options are:
- (1) **Option 1: Adjustment based on Consumer Price Inflation**
 - 1) The quoted rates in the Bill of Quantities shall be fixed and firm for the period from 1 March 2024 to 28 February 2025.
 - 2) Thereafter, the rates shall be adjusted based on the Annual South African

Consumer Price Inflation in February 2025 (i.e. headline year on year rate) plus 2 %, and the fixed portion being a minimum of 10 %. The adjusted rates shall then be fixed and firm for the second 12-month period, i.e., from 1 March 2025 to 28 February 2026.

- 3) A similar rate adjustment shall be done for the following 12-month period, and consecutive 12-month periods, until the contract expires.

(2) Option 2: Adjustment based on tenderer's CPA Formula

- 1) The quoted rates in the Bill of Quantities shall be fixed and firm for the period from 1 March 2024 to 28 February 2025.
- 2) Thereafter, the rates shall be adjusted in accordance with the CPA formula submitted with the tender, the fixed portion being a minimum of 10 %. The base date shall be 1 month prior to tender closing, and the current month shall be December 2024, being 1 month prior to the new period. The adjusted rates shall then be fixed and firm for the second 12-month period, i.e., from 1 March 2025 to 28 February 2026.
- 3) A similar rate adjustment shall be done for the following 12-month period, and consecutive 12-month periods, until the contract expires.
- 4) The Tenderer shall provide the exact composite formula with the exact indices to be used. The formula will be used for evaluation of the bid where an estimation of the price adjustment is done for comparative pricing purposes, and for implementation during the contract for price adjustment and payment. If the information is insufficient where the formula cannot be used to obtain a price adjustment value, the Bidder will not be consulted to obtain such missing information as it would prejudice other Bidders. Hence, in such a case, CPA shall be deemed to be not applicable.

- 5) Illustration of the compilation and use of a CPA formula using 3 indices:

$$P_1 = P_0 \times [(k_1) + (k_2 \times \frac{E_1}{E_0}) + (k_3 \times \frac{T_1}{T_0}) + (k_4 \times \frac{L_1}{L_0})]$$

Where: P_1 = escalated or new price and P_0 = base price, e.g., R100.

k_1, k_2, k_3 and k_4 are the proportions,
where $k_1 = 0.1$ being the fixed portion.

k_2, k_3 and k_4 are the proportions for the indices, e.g., 0.4, 0.2 and 0.3.
the sum of k_1, k_2, k_3 and k_4 must equal 1.0 or less; (generally 1.0).

E_1, T_1 and L_1 are the relevant indices at the end of the escalation period, e.g., 120, 157, 109 respectively.

E_0, T_0 and L_0 are the relevant indices at the end of the escalation period, e.g., 115, 148, 101 respectively.

$$P_1 = 100 \times [(0.1) + (0.4 \times \frac{120}{115}) + (0.2 \times \frac{157}{148}) + (0.3 \times \frac{109}{101})] = R100 \times [1.0533] = R105.33.$$

The escalation amount is therefore R5.33.

C2.1.9 PAYMENTS

C2.1.9.1 Payment shall only be made for plant and/or materials ordered for this project, which are manufactured and delivered to the Contractor's storage facility/ camp site located within the eThekweni Municipality region and inspected by the Employer's Agent or duly appointed Representative.

C2.1.9.2 The Contractor shall submit to the Employer an invoice together with the Bill of Quantities for

materials delivered/ supplied/ installed. Under no circumstances shall the Contractor change the item numbers, item descriptions and/or unit rates in the contract Bill of Quantities when submitting these for claims.

- C2.1.9.3 The following signed supporting documents (as applicable) shall be submitted with the invoices:
- (1) Delivery Notes for the items supplied and being invoiced.
 - (2) Inspection form indicating the materials that have been inspected locally by both the Contractor's authorised personnel and the Employer's Representative.
 - (3) Summary quality, inspection, and test schedules where the quantities of the various items as shown per tower, equipment support structure, foundation, span, and such like.
 - (4) Various schedules, such as painting schedule.
- C2.1.9.4 Payment shall be made on this account when checked and substantiated by the authorised official. Payment will be made only to the Contractor.
- C2.1.9.5 The Employer's payment policy requires that the relevant Departments make payment for goods/ services received and accepted by the Department no later than 30 days after the Contractor submits his valid and correct invoice or claim, provided however that all the terms of the contract are duly complied with.
- C2.1.9.6 It is the intention to apply this policy in this contract. However, it must be noted that several factors sometimes prevent payment from taking place within this stipulated timeframe, such as:
- (1) When there are errors on the invoices, BoQ and/or support documents, the process takes longer, and this delays the processing of other invoices.
 - (2) The Department's Finance Division from time to time may request for additional information and/or seek clarification of claims.
- C2.1.9.7 The release of retention is subject to the signing of the handing-over certificate/s. The handing-over certificate shall only be signed after all allocated work is completed, or when the reduced scope of work as agreed is completed, known defects are cleared, all as-built information is provided, such as foundation drawings, tower drawings, insulator assembly drawings, sag-and-tension tables, existing and replacement assembly coupling lengths, signed QC documents, detailed design files, and after other close-out/ as-built documentation that may be deemed important for the particular project is handed over, by the Contractor, reviewed by the Employer's Agent and deemed to be in order and accepted.

C2.1.10 PAYMENT FOR FORCE OVERTIME COMPENSATION

- C2.1.10.1 Payment for force overtime compensation for Saturdays, Sundays and Public Holidays shall be based on the applicable time-based labour "overtime portion compensation" rates in the Bill of Quantities under daywork rates. There shall be no overtime portion compensation for transport and construction equipment.

Overtime portion compensation shall be as follows:

- (1) Saturday: 0.5 x labour rate.
- (2) Sunday/ Public holiday: 1.0 x labour rate.

- C2.1.10.2 The applicable overtime portion compensation rates shall include overhead charges and profit. Overhead charges and profit include superintendence, timekeeping, clerical work, use of tools and facilities, on-site support, incidental expenses and safety, health, environmental, risk and quality management.
- C2.1.10.3 It must be noted that this compensation will only apply in the case where work is done in the weekend/ public holiday due to Employer operational constraints and/or where the Employer

specifically requests the Contractor to work during the weekend/ public holiday. Approval for this work, including the resources to be used, will be done by the Employer's Agent prior to the commencement of the work.

- C2.1.10.4 It will not apply for cases where the Contractor chooses to work the weekend and/or when there are delays by the Contractor which requires the Contractor to work the weekend/ public holiday.

C2.2: BILL OF QUANTITIES

The Bill of Quantities follows and comprises of **8 pages**. The pages are numbered **BoQ 1 to BoQ 8**.

Quantities are included in the Daywork rates BoQ (Section 2) for bid evaluation purposes, to ensure that the unit prices are fair and reasonable. At Contract award, the quantities shall be made zero, as the items in the Daywork rates are to be used under the provisional sums in the BoQ for Section 1.

SUMMARY OF PRICES	PRICE (R-c)
Section 1- Tower Refurbishment:	
Section 2- Daywork rates (total for bid evaluation purposes):	
Total for Sections 1 and 2, excluding VAT:	
VAT at 15%	
TOTAL PRICE, INCLUDING VAT	

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:

C2.3: RATE OF EXCHANGE DECLARATION

This page to be completed by Bidders offering goods ex-import.

Base rates of exchange (As published by the South African Reserve Bank at the close of business 7 days prior to bid closing – proof of rate used to be attached to bid documents)	

Item	Currency applicable	Free-on-Board (FOB) price

Additional items should be scheduled on a separate page which should be signed and dated by the Bidder.

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:

C2.4: CONTRACT PRICE ADJUSTMENT SCHEDULE

This page is to be completed by bidders offering goods that are subject to specific contract price adjustment (CPA) formula. A minimum of 10 % of the price tendered for each item shall be fixed when applying escalation.

Tick Option/s selection as described in **Clause C2.1.8: Contract Price Adjustment:**

Option	Supply	Install
1. CPI based		
2. Tenderer's CPA formula		

For Option 2, provide relevant details, such as formula, indices to be used, etc, in the table below.

Item	Indices	Percentage contribution to price	CPA formula (Minimum 10 % of price to be fixed)

Additional items should be scheduled on a separate page which should be signed and dated by the Bidder.

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

NAME (Block Capitals):

Date

SIGNATURE:

PART C3: SCOPE OF WORK

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C3.2 PROJECT SPECIFICATIONS	98
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C3.1: PROJECT DESCRIPTION AND SCOPE OF CONTRACT

C3.1.1 Description of Works

C3.1.2 Operational Data

C3.1.3 Description of Site and Access

C3.1.4 Work to be Performed by the Contractor

C3.1.5 Materials Supplied by the Employer

C3.1.6 Monitoring and Inspection of the Works by Employer

C3.1.1 Description of Works

C3.1.1.1 The contract is for the supply, delivery and erection of materials for the refurbishment of various 275 kV and 132 kV overhead transmission lines, within the area of supply of the Employer.

C3.1.1.2 A total of 13 lines have been identified for tower refurbishment, as per table below. This list is subject to change at the sole discretion of the Employer at any time, should the need arise. The towers or portions of the towers will be prioritized based on condition, importance, network operating conditions and outages, funding, and the contract duration.

No.	Line Description	Location	No. of Towers on the Line	No. of Towers Identified for Refurbishment	Portion of Tower Identified for Painting
1	Klaarwater-Woodlands 132 kV line with double circuit towers	Southern	61	13	Full
2	Illovo-Durban South 275 kV line with double circuit towers	Southern	61	8	Full
3	Durban South-Coedmore 132 kV line with double circuit towers	Southern	12	12	Full
4	Coedmore-Havenside 132 kV line with double circuit towers	Southern	4	2	Full
5	Umgeni-Avoca 132 kV line with double circuit towers	Western	49	49	Top-half
6	Quarry-Bellair 132 kV line with single and double circuit towers	Western	23	23	Top-half
7	Parlock-Umgeni 132 kV line with double circuit towers	Western	33	33	Top-half
8	Umgeni-Reservoir Hills 132 kV line with double circuit towers	Western	22	22	Top-half
9	Ottawa-Canelands 132 kV line with double circuit towers	Northern	55	39	Top-half
10	Quarry-Roberts 132 kV line with single and double circuit towers	Western	7	7	Top-half
11	Klaarwater-Quarry 132kV line with single and double circuit towers	Western	44	44	Top-half
12	Lotus Park-Plangweni 132 kV line with double circuit towers	Southern	25	25	Full
13	Ottawa-Parlock 132 kV line with double circuit towers	Northern	62	18	Top-half
	Total	13	458	295	

C3.1.1.3 One tower schedule example with tower masses is given in the Site Information- for information purpose only.

C3.1.1.4 The unit of measure for the surface preparation and painting of the structures is given as the area (in m²) the steel members and plates. This is a change from the previous procedure of using the mass (in kg) of the structure (or part thereof) for the pricing for painting. The previous procedure used the mass because this information was provided by the manufacturer of the structure and not the effective surface area. Since the area to mass ratio varies significantly from the bottom section to the top section of the structures, the area unit of measure would be more representative of the effort required, especially for cases where only the top-half of the structures is specified for painting. This procedure requires the area of the structure surface to be calculated.

The area has been determined for the commonly used structures by calculating the surface area of the steel members and plates. It is the best estimate of the effective area to be coated. The overlap areas of the steel members and plates have not been deducted because these are taken to account for the additional area of the fasteners.

For the structures where the calculations have been done, the area to mass ratios varies from 25 m²/tonne (bottom-half) to 45 m²/tonne (top-half), with an average value of 35 m²/tonne for the

complete structure.

For the structures where there are no drawings to calculate the surface area, the members shall be measured on site and the area will then be calculated. The Contractor shall assist with the exercise. Alternatively, an estimate will be done, and the figures determined by the Employer's Agent or Representative shall be final.

C3.1.1.5 This Contract shall be carried out in full accordance with this detailed scope of work, all related conditions of contract, technical specifications, schedules, and drawings.

C3.1.2 Operational Data

C3.1.2.1 Operational Data is given in the table below.

Item	Description	Details
1.	Temperature:	
1.1	Highest mean of:	
	(a) Daily maximum	28 °C
	(b) Monthly maximum	33 °C
1.2	Extreme recent maximum observed	41 °C
1.3	Lowest mean of:	
	(a) Daily minimum	10 °C
	(b) Monthly minimum	5 °C
1.4	Extreme minimum observed	2 °C
2.	Mean monthly relative humidity	65 %
3.	Wind (Maximum expected 2 second gust speeds):	
	(a) 25-year return period m/s	40 m/s
	(b) 50-year return period m/s	42 m/s
4.	Pollution	<ul style="list-style-type: none"> • Average marine and industrial type • Humid, salt-laden and climate is sub-tropical. • Sugarcane fires.
5.	Solar Radiation:	1 000 W/m ²
6.	Isoceraunic level:	
	(a) Thunderstorm activity	36 days/annum
	(b) Lightning ground flash density	2 to 5 strikes/km ² /annum
7.	Rainfall:	
	(a) Mean annual	1 019 mm
	(b) Maximum observed in 24 hrs	300 mm (Heavy rain and flooding on 2022-04-11)
8.	Mean annual barometric pressure	100 kPa
9.	Altitude (applicable to all lines and other equipment within the system)	From 0 to 1 000 m above sea level

C3.1.2.2 Electrical clearances for power lines and substation plant

Item	Description	132 kV nominal voltage	275 kV nominal voltage
1	Minimum safety clearance, as per SANS 10280-1	1.45 m	2.5 m
2	Minimum safety clearance, as per Employer Safety Rules	1.45 m	2.35 m
3	Section clearance as per eThekweni Electricity Safety Rules	3.5 m	4.6 m
4	Minimum vertical clearances- for various conditions	SANS 10280-1	SANS 10280-1
5	Minimum horizontal clearances to all ground, buildings, vegetation, and structures not part of the power line - as per SANS 10280-1	3.0 m	3.0 m

C3.1.2.3 Work on MV/ HV Mains and/or Apparatus (extract from eThekweni Electricity System Operating Regulations Section 3)

- (1) When work has to be performed on MV/ HV mains and/or apparatus or MV/ HV conductors have to be handled or approached within the Safety Clearance, these must be isolated from every source of supply, and proved dead by testing wherever possible and then earthed, and persons who are to perform such work shall have been issued with a Work Permit.
- (2) Personnel working earths shall be applied to, and retained on, all overhead conductors as an additional safety measure by electrical technicians, electricians, specifically trained construction supervisors, linesmen and line-hands when working at any position remote from the other approved earthing equipment applied by the Authorised Person. Personal working earths shall be placed in such a position that they are visible from and applied as close as possible to the point of work. Personal working earths may only be applied to items of equipment other than overhead conductors on the written instruction of the Authorised Person as record on the Work Permit.
- (3) In instances where the circuit must be broken during the course of the work, steps must be taken to ensure that both sides of the circuit remain earthed at the workplace. If the temporary removal of the earths is unavoidable to carry out the work, the earths must be replaced as soon as circumstances permit.

C3.1.2.4 Safety earthing for construction and maintenance of HV Overhead Power Lines

- (1) For electrical equipment connected to the networked, the operating procedures requires a line to be switched off, isolated, tested, and earthed, and only then will a work permit be issued by the Authorised Person to a Competent and/or Specifically Trained Person. The Authorised Person applies the control earths at both ends of the lines.
- (2) If the control earths or additional portable earths installed on the phase conductors and earthwire/ OPGW are not visible on both sides of the work site, then workers shall not break safety clearance requirements.
- (3) Voltage may appear at the worksite due to accidental energization either through the isolating device or due to contact with another energized circuit. Voltages or currents may be present due to electric or magnetic induction from adjacent energized circuits or due to a direct or indirect lightning stroke.
- (4) When an earthed conductor becomes energized, the current flowing through earthed parts could result in potentially hazardous voltage differences between these parts if the safety earthing is inadequate.

- (5) It is the responsibility of any Organisation tasked to maintain and/or construct HV OHL to ensure compliance with all the requirements contained in the Operating Regulations for High Voltage Systems, Safety Rules, and OHS Act, when working on the power system. The Organisation needs to ensure that all staff is adequately trained and authorized to the requirements contained in the Operating Regulations, Safety Rules as well as the OHS Act.
- (6) Proper protective (safety) earthing will result in a reduced working hazard at the worksite. Sufficiently low-resistance earth leads will limit excessive voltages in the jobsite aloft, and proper work procedures will minimize exposure to step and touch voltages on the earth below the structure.
- (7) Due to the expansive nature of power lines, additional earths (refurbishment earths) are to be installed by the Contractor at suitable locations along the line to eliminate or reduce the impact of static charges or induced voltages on the conductors.
- (8) If work must be done within close proximity (within the safety clearance distance), then personal working earths are to be applied and these shall be visible. The personal working earths are the responsibility of the Team Supervisor, and he/she will ensure these are properly rated and applied correctly.

C3.1.3 Description of Site and Access

- C3.1.3.1 The site is where the various lines are located within the eThekweni Electricity Area of Supply. The locations stretch from the North of Durban (Tongaat) to the South of Durban (Amanzimtoti) and West of Durban (Waterfall).
- C3.1.3.2 Access to work on the transmission lines and transmission substations is provided for by the Employer. For access to the sites, the Employer's representative will liaise with the landowners/occupiers of properties only in the first instance, thereafter the Contractor shall follow up and confirm permission to enter. The Contractor shall visit the transmission lines and advise each property owner of the proposed activities prior to any work commencing.
- C3.1.3.3 The Contractor is reminded that access may be restricted at some locations, and no additional costs will be considered if access is not available.
- C3.1.3.4 Where the access to the structure is not possible due to overgrown vegetation, such as grass, sugarcane, bush and trees, the Contractor shall advise the Employer's Agent thereof and the Employer shall clear the vegetation. Alternatively, the Employer's Agent may request the Contractor to clear the vegetation around the structure (tower) and underneath it to render it accessible from the nearest access road or pathway. Cutting and subsequent removal of bush vegetation, trees and/or sugarcane and disposal of this shall be done as per the Environmental Specification and/or Environmental Management Programme. Payment for this shall be made from the respective provisional sum in the Bill of Quantities.
- C3.1.3.5 Damage or disturbance to land, property, roads, field drains, fences, walls, hedges, gates and the like occurring during the execution of the contract works, shall be made good to the reasonable satisfaction of the Employer's Agent. The cost of the remedial/ rehabilitation work shall be for the Contractor's account. If it can be proven that the damage and/or disturbance was unavoidable, and that sufficient consultation took place with the Employer's Agent and/or Representative prior to such occurring, then the cost of the remedial/ rehabilitation work shall be for the Employer's account and payment shall be made from the respective provisional sum in the Bill of Quantities.
- C3.1.3.6 The Contractor shall maintain an accurate record (nature and extent) of all damages to crops and other physical features and these shall be submitted to the Employer's Agent. A schedule shall

be compiled indicating the following:

- (1) Date of damage.
- (2) An accurate area measurement of the damage.
- (3) The signature of the landowner/ farm manager agreeing to the measurement of the damaged areas.
- (4) Unit valuation rates to be provided by the Employer.

C3.1.4. Work to be Performed by the Contractor

C3.1.4.1 Specific activities for structure refurbishment

C3.1.4.1.1 The specific scope of work and the associated Bill of Quantities (the Price Schedule) is for the refurbishment of various 275 kV and 132 kV lines. Estimated quantities are given in Bill of Quantities. The install prices shall also be applied, where applicable, for the removal, dismantling, packing, disposal of material from site and offloading at locations within the eThekweni Municipal region as may be assigned by the Employer's Agent. Some items may have to be delivered and offloaded at the Employer's depot in Springfield.

C3.1.4.1.2 This refurbishment work consists primarily of the replacement of severely corroded, damaged, and missing steel members and fasteners, cleaning and painting of structures (towers) and other steel structures, replacement of step bolts, refurbishment of foundations and earthing improvements.

C3.1.4.1.3 The specific activities may include some or all of the following:

- (1) Assess the accessibility of the structures.
- (2) Request Employer's Agent to have vegetation cleared where access is hindered. Alternatively, clear vegetation where Employer is unable to do this.
- (3) Perform inspections of the towers and working area at the towers and submit report to Employer's Agent.
- (4) Replace individual steel members and fasteners.
- (5) Replace sections of a tower, such as the complete earth-peak, which will require detachment of the assemblies, dismantling of the affected section, erection of the new section either by hand method or crane, and re-attachment onto the new section.
- (6) Clean and paint steel structures/ towers which are unpainted or previously painted. The scope may be for selected portions of the structure/ tower, such as top-half, bottom-half, or the complete structure/tower, being at the discretion of the Employer.
- (7) Refurbish foundations and stubs which include breaking off defective concrete, cleaning and painting stubs and other steel at the foundation and building up of the cap/ pier.
- (8) Strengthen foundations by adding more reinforcing and concrete.
- (9) Measure tower footing resistance, and/or install additional earthing to lower the values to within specifications.
- (10) Replace missing or corroded earthstraps.
- (11) Refurbish jumper connections, 2 or 4 bolt type.
- (12) Clean and paint compression dead-end eye and shackle; alternately clean and paint the dead-end eye and replace the shackle.
- (13) Clean and seal the compression dead-end eye and shackle with Denso mastic and tape or equivalent.
- (14) Install OPGW and earthwire bonding leads and clamps and seal the connections using Denso mastic and tape or equivalent.
- (15) Replace labels, label brackets, anti-climb wire, brackets, ACD gates, and bird-guards.
- (16) Load, transport and offload the dismantled materials as per the Procedure for return of dismantled materials.

Note:

For activities listed above which are not specifically itemised and priced in the **Bill of Quantities**, the work shall be subject to approval by the Employer's Agent, and payment for the cost of executing the work shall be made from the respective provisional sum in the **Bill of Quantities**.

- C3.1.4.1.4 All replacement parts and components shall comply with the General Technical Specifications. The Employer may decide to supply some materials as free-issue. When this is decided, the Contractor, upon taking delivery of the materials, shall assume responsibility for these, and these shall be covered by the Contractor's insurance.

C3.1.4.2 Refurbishment execution programme

- C3.1.4.2.1 The various types and stages of work shall be programmed by the Contractor on a monthly basis, and more frequently when there are significant changes to the programme.
- C3.1.4.2.2 The Contractor shall provide a detailed programme in the form of a Gantt Chart and in spreadsheet format. The Contractor shall also provide work plans for each overhead line to facilitate inspections by both the Contractor's Inspector and the Employer's Agent or Representative.

C3.1.4.3 Resources (Personnel and Construction Equipment)

- C3.1.4.3.1 All work shall be managed, supervised, and executed by suitably qualified, technically trained, experienced, and competent personnel.
- C3.1.4.3.2 The Contractor shall provide resources that comply with the requirements indicated in the Conditions of Tender, Conditions of Contract and in the **Returnable Schedules**. Failure to do so shall render the Contractor non-compliant with the contract specifications and requirements and may negatively affect the continuation of work and/or allocation of further work.
- C3.1.4.3.3 Replacement key personnel shall have similar or better qualification, competency and/or capacity. These key personnel shall be subject to evaluation and acceptance by the Employer's Agent.
- C3.1.4.3.4 The Contractor shall always ensure compliance with the OHS Act and adherence to the Employer's Safety Rules.
- C3.1.4.3.5 A Safety Officer shall be required to be engaged for the works under this contract. The extent of the engagement shall depend on the risks associated with the execution of the works. For instance, where there is work being performed at heights, a Safety Officer shall be in attendance. The Contractor shall engage the services of a Safety Officer who shall be registered (with active status) with SACPCMP and have a valid certificate. Payment for the cost of this Safety Officer for undertaking approved work shall be made from the respective provisional sum in the **Bill of Quantities**.

Where a Contractor engages the services of a Safety Officer for its own internal requirements, the cost of this shall be for the Contractor's account.

C3.1.4.4 Inspection of Towers before Work Commencement

- C3.1.4.4.1 Upon allocation of the work, the Contractor shall assess the accessibility of the structures. The Contractor shall provide details of the assessment, more particularly quantities for items requiring action, such as clearing of vegetation.
- C3.1.4.4.2 The Contractor shall perform a detailed close-up inspection of the:
- (1) Tower steel sections and fasteners and mark those requiring replacement.
 - (2) Tower condition in terms of whether these were previously painted or not, and if previously

- painted, what type of paint was used.
- (3) Bonding of the OPGW and/or Earthwire.
- (4) Compression dead-end eye and jumper connections.
- (5) Foundations, with dimension details of the existing foundations and proposed gradient/build-up.
- (6) Earthing, with existing and proposed dimensions and quantities.
- (7) Tower accessories such as labels, ACD, bird-guards, etc.
- (8) Items installed on towers, such as anti-theft devices.

C3.1.4.4.3 A detailed inspection report, schedules with quantities (and dimensions where necessary) and photos shall be submitted to the Employer's Agent.

C3.1.4.5 Work on Towers

C3.1.4.5.1 Generally, work at the top-half of double circuit towers shall be done on one circuit with the other circuit being Alive. Both circuits will be Alive when working at the bottom-half of the towers. All safety precautions shall be taken, particularly visible earthing of phase conductors and earthwires and OPGW.

C3.1.4.5.2 In some instances, other construction work may be undertaken at the same time as the tower refurbishment. The Contractor shall accommodate this situation, as may be reasonable. The topcoat and touch-ups shall only be applied after the other work is completed.

C3.1.4.6 Replacement of Steel Members and Fasteners and Step-bolts

C3.1.4.6.1 All steel members and fasteners requiring replacement shall be marked with red paint. A detailed list with dimensions shall be compiled in spreadsheet format and submitted to the Employer's Agent. The estimated quantities may be adjusted by the Employer's Agent. Should the details not be sufficient for the Employer's Agent to make a decision on the extent of replacement that should be undertaken, the Contractor shall redo the inspections at his own expense. Material orders shall only be placed after approval by the Employer's Agent.

C3.1.4.6.2 Generally, steel sections and fasteners shall be replaced one at a time, and without affecting the integrity of the tower. The steel members shall be delivered to site already cut to size or delivered in standard lengths to be cut to size on site.

C3.1.4.6.3 The replacement steel members and bolts shall be as per the General technical specification for supply, delivery, and erection of materials for 132 kV and 275 kV steel lattice power lines. In particular, hot-dip galvanised and of the following grades:

- (1) Steel members: Grade S355JR, structural steel.
- (2) Bolts: Grade 6.8.
- (3) Nuts: Grade 6.0.
- (4) Washers: Grade S275JR.

C3.1.4.6.4 The procedure for individual fastener/ bolt replacement shall be as follows:

- (1) Remove the corroded bolt and measure to replace with correct dimensions.
- (2) Clean the area where the bolt is removed. Any existing damaged paintwork shall be cleaned.
- (3) Prepare the surface of the area where the bolt is removed to cater for painting after the new bolt is installed.
- (4) Fit the new bolt and tighten as per bolt specification.
- (5) Apply 1 coat of an all-in-one primer and topcoat paint (Sigmafast 210 HS or equivalent) to the existing and new bolt at the connected point, to a dry film thickness of at least 80 µm.

C3.1.4.6.5 The procedure for individual steel member replacement where the integrity of the tower is not compromised shall be as follows:

- (1) Remove the corroded member/s and take measurements.
- (2) Mark the new steel, cut to size, and punch the holes.
- (3) Round off sharp edges and coat the cut and punched areas with zinc-rich primer.
- (4) Prepare the area of the existing steel where the new steel is to be installed to cater for painting after the new steel is installed. Any existing paintwork damaged when the steel is removed shall be cleaned-off and the surface prepared. Apply zinc-rich primer to these contact surfaces.
- (5) Fit the new steel member onto the tower using new fasteners.
- (6) Apply 1 coat of an all-in-one primer and topcoat paint (Sigmafast 210 HS or equivalent) to the existing and new bolt at the connected point, to a dry film thickness of at least 80 µm.

C3.1.4.6.6 The procedure for replacement of individual steel members or a section of a structure where the integrity of the tower is or may be compromised shall include some or all the following activities:

- (1) Assess the overall tower condition in conjunction with the Employer's Agent.
- (2) Identify the steel members requiring replacement.
- (3) Compile a job specific method statement, safe work procedure, and risk assessment.
- (4) Install supports to maintain tower stability when the member/s is/are being replaced.
- (5) Reduce tension on the conductors at the affected points.
- (6) Detach the insulator assemblies and conductors from the affected sections.
- (7) Remove the members by hand and lower to ground.
- (8) For replacement of a tower section, support the tower section using a crane or Gin pole, disconnect the section from the tower, and lower to ground.
- (9) Prepare surface of existing steel as per procedure for replacement of individual steel members.
- (10) Replace the steel members and/or the tower section.
- (11) Re-attach the insulator assemblies and conductors.
- (12) Re-tension the conductors.

The Employer may elect to engage the services of a Line Construction Contractor to execute this work, if it is more complicated than what the Refurbishment Contractor can undertake.

Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.

C3.1.4.7 Surface Preparation and Painting of Towers

C3.1.4.7.1 The tower steel condition may vary depending on the age and previous work that may have been done on the tower. The Employer's Painting Specification shall be applied accordingly for the various conditions. Should there be a condition that is not defined in the Painting Specification, the Contractor shall inform the Employer's Agent and, in conjunction with the Paint Manufacturer/Supplier, provide advice on the most suitable refurbishment approach.

C3.1.4.7.2 Surface preparation and painting of the tower and all quality control shall be done in full compliance with the Employer's Painting Specification. The surface preparation and painting processes shall be approved and monitored by the Employer's Agent and the Paint Manufacturer/Supplier.

C3.1.4.7.3 The abrasive blasting medium (blast-grit) shall be Blastrite B40 or equivalent.

C3.1.4.7.4 The existing paint work on towers shall be inspected, blast-cleaned, tested for adhesion, and the required coating shall be applied as per the Painting Specification.

C3.1.4.7.5 Where required, and upon instruction by the Employer's Agent, the Contractor shall apply an **approved zinc-rich primer on fasteners and/or stripe coat on steel** after blast-cleaning instead of normal surface tolerant epoxy primer/stripe coat. This is for conditions where the galvanizing layer is significantly eroded and/or for structures exposed to severe pollution.

C3.1.4.7.6 Adequate precautions and protective covering/ sheets shall be applied over insulators and other items on the tower to prevent grit and paint contamination. Any contamination occurring on insulators shall be reported to the Employer's Agent, and upon approval, the insulators shall be cleaned without causing any damage or where the paint cannot be removed by this means, insulators shall be replaced and the cost shall be for the Contractor's account.

C3.1.4.7.7 Estimated tower steel surface area shall be provided in the tower schedules, and these shall be used for payment purposes. The Employer's Agent may request the Contractor to assist his Site Representative/s to perform measurements of the steel to obtain or verify the surface area.

C3.1.4.8 Refurbishment of Foundations

C3.1.4.8.1 **Foundation pier/ cap and stub refurbishment of existing and/or building up of new shall include the following main activities:**

- (1) Surface preparation, build-up and painting and all quality control shall be done in full compliance with the Employer's Painting Specification.
- (2) Contractor and Employer's Agent representative to agree and sign-off written proposed refurbishment plan, such as whether the work involves construction of gradient or build-up and the plan shall include dimensions.
- (3) Remove vegetation and soil at the foundation.
- (4) Break existing concrete pier/ cap to remove all weak (< 25 MPa) and/or defective concrete, and to expose all rusted steel.
- (5) Clean and paint the steel at the foundation.
- (6) For build-up of concrete pier/ cap up to 250 mm in height, rebar is not required.
- (7) For build-up of concrete pier/ cap > 250 mm in height, fix rebar, install shutters, apply keying agent (Sika Armatex 110 or equivalent), perform slump test, take samples for cube test, and pour concrete.
- (8) Vibrate concrete with a needle vibrator for build-up.
- (9) Float concrete to achieve sufficient gradient for proper water run-off.
- (10) Seal and paint the concrete and the steel protruding out of the concrete.
- (11) Refurbish/ replace earthstraps: clean and seal from 1 m below ground level up to the start of the connection point with Denso UV resistant tape or equivalent; and connect to tower steel with approved electrical joint compound. Then paint over at the connection to the tower.
- (12) Reinststate/ backfill and compact the soil.

C3.1.4.8.2 **Gradient on existing cap requirements:**

- (1) Surface preparation, build-up, painting, and all quality control shall be done in full compliance with the Employer's Painting Specification.
- (2) Chip concrete at steel interface to expose and inspect for corrosion. Chip until all corrosion is fully exposed and can be cleaned out.
- (3) If remaining concrete appears to be less than 25 MPa and/or porous, then continue to chip out.
- (4) Inspect the exposed section of the steel for corrosion.
- (5) Clean and paint the steel at the foundation. Remove corrosion, rust and/or old/ defective paint with minimal removal of the existing galvanising, (less than 10 µm removal).
- (6) Apply approved zinc-rich surface tolerant primer onto the steel.
- (7) Apply approved keying/ bonding agent to concrete and steel, (Sika Armatex 110 or equivalent).
- (8) Pour concrete and create gradient (slope) for proper water run-off.
- (9) Wait a minimum of 7 days for curing of concrete.
- (10) Prepare surface and apply 3 coats of paint.

C3.1.4.8.3 **Build-up pier/ cap requirements:**

- (1) Surface preparation, build-up, painting, and all quality control shall be done in full compliance with the Employer's Painting Specification.
- (2) Chip concrete at steel interface to expose and inspect for corrosion. Chip until all corrosion is fully exposed and can be cleaned out.
- (3) If remaining concrete appears to be less than 25 MPa and/or porous, then continue to chip out.
- (4) Inspect the exposed section of the steel for corrosion.
- (5) Clean and paint the steel at the foundation. Remove corrosion, rust and/or old/ defective paint with minimal removal of the existing galvanising, (less than 10 µm removal).
- (6) Apply approved zinc-rich surface tolerant primer onto the steel.
- (7) Install rebar of suitable size into concrete (1 % to 2 % of concrete volume) when building up greater than 250 mm:
 - (a) Drill holes into concrete to minimum depth of 15 times the diameter of the rebar or a minimum of 200 mm, whichever is the greater.
 - (b) For build-ups of 750 mm and higher, the vertical rebar shall be at least 16mm diameter.
 - (c) Scrub the hole with a stiff bristle brush to remove all dust, dirt, debris, or any other bond-inhibiting material from the drilling procedure.
 - (d) Blow the hole clean with oil-free compressed air, brush, and blow it clean again. Holes should be clean and free from bond-inhibiting material.
 - (e) Inject the anchor mortar. Alternatively, insert the resin capsule.
 - (f) Insert the rebar with a twisting motion into the hole forcing it to the bottom until the mortar or resin flows to the top and the rebar is fully inserted. Twist the rebar to ensure proper contact and bond.
 - (g) Allow the mortar/ resin to cure undisturbed for the specified time prior to applying any load.
 - (h) Install other rebar to the anchor rebars and then install the tie rebar and stirrups.
- (8) Apply approved keying/ bonding agent to concrete and steel, (Sika Armatex 110 or equivalent).
- (9) Install shutter boards.
- (10) Pour concrete and vibrate with a needle vibrator.
- (11) Float concrete to achieve sufficient gradient for proper water run-off.
- (12) Wait a minimum of 7 days for curing of concrete.
- (13) Prepare surface and apply paint.

C3.1.4.8.4 **Seal sub-surface steel in waterlogged areas:**

- (1) After the process of cleaning and applying zinc-rich paint onto the steel as per the Painting Specification for stub, apply sealing mastic, (Denso or equivalent), at irregular shaped areas; and then wrap the steel completely with sealing tape (Denso or equivalent) from the bottom where the steel is visible to 50 mm below the top of the final concrete level.
- (2) Thereafter, proceed with activities similar to that for build-up.

C3.1.4.8.5 **Splice stub/plates with fasteners to strengthen the corroded stub:**

- (1) If the integrity (strength) of the tower is undermined due to the severe corrosion of the stub and/or surrounding steel, the Contractor shall strengthen the stub and/or surrounding steel.
- (2) Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.
- (3) Should a design be required for this activity, the Contractor shall engage the services of a Structural Engineer, subject to approval by the Employer's Agent.
- (4) A detailed procedure shall be compiled for this work.
- (5) Some of the main activities are:
 - (a) Install external support for tower, such as backstays, if required.
 - (b) Blast-clean and grind off severely corroded stub which requires a splice.
 - (c) Drill holes onto existing and new stub/plates.
 - (d) Smoothen out burrs.

- (e) Apply approved zinc-rich primer to 75 µm DFT around the holes and on the complete section of the existing stub/ steel.
- (f) Fit new piece of hot-dip galvanized stub/plates with fasteners to strengthen stub.
- (g) Thereafter, proceed with activities similar to that for build-up.

C3.1.4.8.6 Foundation strengthening:

- (1) Should there be degradation of the foundation (concrete and/or rebar) and/or defects, to the extent that the integrity (strength) is undermined, the Contractor shall strengthen the foundation.
- (2) Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.
- (3) Should a design be required for this activity, the Contractor shall engage the services of a Structural Engineer, subject to approval by the Employer's Agent.
- (4) A detailed procedure shall be compiled for this work.

C3.1.4.9 Tower Footing Earthing Improvement

C3.1.4.9.1 Measurement:

- (1) Measure tower footing resistance using a high frequency tester.
- (2) As part of the test records, include the date, time, line description, tower number, leg reference, resistance value, number of existing earth straps at the leg, ambient temperature, soil condition (dry, moist, wet, waterlogged, etc).
- (3) Submit the test results to the Employer's Agent for analysis and approval for remedial work to be undertaken.
- (4) Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.

C3.1.4.9.2 Earthing improvement:

- (1) Install additional earthing, where required, to lower the resistance values to within specifications.
- (2) Additional earthing may be earth-straps or a combination of earth-straps and earth-rods, with the earth-strap laid outwards away from the tower.

C3.1.4.10 Refurbishment of Jumper Connections

This shall be done as follows:

- (1) Disconnect the jumper lugs.
- (2) Clean the contact faces of the jumper lug and dead-end tag with sandpaper, wire brush and cleaning solvent.
- (3) Apply a thin layer of approved electrical joint compound on both faces and clean again.
- (4) Wipe off all dirt and residue with a lint-free cloth.
- (5) Apply a thin layer of electrical joint compound to one face.
- (6) Fit the two parts together and fasten with new stainless-steel bolts/washers and nuts.
- (7) Tighten to the recommended torque values.
- (8) Wipe off excess electrical joint compound.
- (9) Record the torque value on the quality control documentation.

Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.

C3.1.4.11 Refurbishment of Compression Dead-end Eye

C3.1.4.11.1 Method 1: Clean and Paint

This shall be done as follows:

- (1) Attach the clamp and sling and slacken the tension at the shackle/ dead-end eye by clamping the dead-end eye and pulling towards the tower.
- (2) For twin conductors, slacken tension and refurbish one dead-end eye at a time.

- (3) Sweep blast-clean the dead-end eye and the shackle.
- (4) Wipe the cleaned area with a clean lint-free cloth.
- (5) Apply the approved zinc-rich paint to the dead-end eye and shackle. Wait for the coating to dry.
- (6) Then apply the approved intermediate and topcoat as per the Painting Specification for Weathered Unpainted Steel or Weathered Previously Painted Steel.
- (7) Release the clamp slowly until the full tension is taken up by the shackle and dead-end eye.
- (8) Remove the clamp and sling.
- (9) As an additional activity, if the shackle is badly corroded or worn, then it must be replaced instead of cleaning and painting. This option will be priced separately in the Price Schedule.

Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.

C3.1.4.11.2 Method 2: Clean and Seal

This is an alternative method where the dead-end eye and shackle are cleaned with hand tools and wrapped with Denso mastic and tape or equivalent. There are several variations in the refurbishment method, such as the option to apply zinc-rich primer prior to sealing.

Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.

C3.1.4.12 Replacement of Tower Accessories

C3.1.4.12.1 Tower accessories, such as labels, anti-climb devices, brackets, ACD gates, and bird-guards, shall be inspected prior to actual work commencement on the towers. Schedules shall be compiled indicating their condition which will submitted together with photos to guide the decision by the Employer whether or not to replace.

C3.1.4.12.2 If the accessories are in good condition prior to the refurbishment, the Contractor shall take the necessary measures and precautions, such as covering, to ensure that these items are not damaged. If these are damaged by the Contractor or its sub-contractors, the Contractor will be responsible for the repair and/or replacement at his own cost.

C3.1.4.12.3 Bird-guards removed, to facilitate tower refurbishment, shall be refitted by the Contractor. The Employer will provide the PVC straps. Where bird-guards have not been installed previously, have fallen, are missing, or broken, new ones shall be fitted by the Contractor. The Employer shall supply the materials, alternatively the Contractor may be requested to supply these at cost plus mark-up.

C3.1.4.12.4 The barbed wire may be partially removed should this be necessary to facilitate climbing and painting. However, it shall be refitted to make it functional and effective when the Contractor is not working at the tower. This is deemed to be part of the tower cleaning and painting activities and pricing. Should the anti-climb device be in condition good enough for further use prior to the commencement of the refurbishment work, the Contractor is required to refit the same without additional cost to the Employer. If it is defective to the extent that it is not fully functional, then it may be replaced subject to approval by the Employer's Agent. Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.

C3.1.4.13 Procurement of materials and/or additional services not priced in the BoQ

C3.1.4.13.1 The Contractor may be required to do additional (ad hoc, extra, emergency) work such as modify the anti-climb devices, install a gate to facilitate climbing of the tower, build retaining walls to stabilise the ground, prevent soil erosion, and prevent silting, undertake repairs to damaged structures, replace insulator and hardware, and such like.

C3.1.4.13.2 Procurement of materials and/or additional services from 3rd parties which have not been priced in the **Bill of Quantities** shall be payable from the respective provisional sum item in the **Bill of Quantities** and shall be done as per the following requirements:

- (1) The procurement is subject to approval by the Employer's Agent.
- (2) The supplier/ service provider is independent from the contractor.
- (3) The supplier is a registered business entity and in good standing with the relevant authorities, such as SARS, Municipalities, and COIDA, and has resources with the necessary competencies (qualifications and skills) to perform the work.
- (4) Preference shall apply to use local designated enterprises as per the 2017 PPPFA Regulations and the eThekweni Municipal Council's framework for empowerment strategies.
- (5) Competitive pricing method shall be applied; (minimum 3 quotes where feasible and cost effective to do so).
- (6) The Employer's Agent reserves the right to provide a shortlist and be involved in the evaluation for any specific requirement.
- (7) The appointment of the most responsive/ preferred supplier/ service provider shall be subject to the approval of the Employer's Agent.

C3.1.4.14 Project close-out documents

C3.1.4.14.1 Inspection reports, records of work done, quality control and inspection sheets and photos, measurements, test results, drawings, marked-up documents, and any other associated document shall form part of the close-out documentation.

C3.1.4.14.2 The Contractor shall hand all "as-built" and close-out documents over to the Employer's Agent. Other requirements for the as-built and/or close-out documentation are specified in the General Technical Specification.

C3.1.5 Materials supplied by the Employer

C3.1.5.1 The Employer may supply materials as "free-issue" for some parts of the works, as may be necessary from time to time. The Contractor shall inspect the materials together with the Employer's representative, check for completeness, pick up and transport the materials to his (secured) site stores, and implement an efficient material management system.

C3.1.5.2 Should there be a shortage of materials, the Contractor shall notify the Employer's Agent, who will either obtain such from the Employer or request for the Contractor to provide such at the rates in the Contract, or based on approved quotations if there are no rates for such items.

C3.1.6 Monitoring and Inspection of the Works by Employer

C3.1.6.1 Monitoring, and inspections will be performed by the Employer's site representatives.

C3.1.6.2 Where assistance, monitoring and/or inspections by the Employer's resources (internal or contracted) is catered for, as may be specifically indicated, the following working hours under normal conditions shall apply:

- (1) 5 days working week Monday to Friday.
- (2) 07:30 to 16:00. Allowance must be given within this time period for driving to/from site.

C3.1.6.3 In the event that these resources are required outside these times, the Contractor shall make a specific request and in advance to the allow the Employer to assess the merits and costs associated with this request. The Employer will make the final decision on the allocation of resources for the stated purposes.

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.

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PS.1 Construction Programme

- PS.1.1 The refurbishment work is scheduled to occur within the original contract period of **24 months**, and additional time shall be granted subject to approval by the Employer. The requirements and offer for the refurbishment programme submitted with the tender (**Part T2.2.22: Refurbishment Programme Requirements**) shall be used as the basis for the programming of the work.
- PS.1.2 The Contractor shall provide a detailed programme for each work order, and this shall include material order and delivery dates.
- PS.1.3 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 **Contract Data 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.1.4 The Contractor's attention is drawn to the fact that several factors will affect the programming and method of carrying out the works, hence the Contractor shall compile a **constructability plan**. The constructability plan shall consider the constraints and opportunities to ensure the successful execution and completion of the particular project.

The more important of these, whichever are applicable, are:

- (1) Availability of the plant in terms of outage of the power lines.
- (2) Notification required by service organisations, such as SANRAL.
- (3) Any special sequence in which work must be carried out. For example, where certain portions of work must be completed before work may commence on other portions or other lines.
- (4) Access to the lines, and in particular to the towers.
- (5) Access to the towers via private properties.
- (6) Crossings, such as another power line, Telkom lines, roads, etc.
- (7) Safety and security.
- (8) Traffic restrictions.

This information, together with inputs for the Network Control Centre regarding outage availabilities, shall be used to generate a workable constructability plan.

- PS.1.5 Extension of time shall be provided where the delays are beyond the control of the Contractor, such as restricted access or restricted availability of the assets, however extension of time is not permitted beyond the approved time for achieving Practical Completion. Where the delays are not due to the Contractor, and materials are un-used, these shall be handed over to the Employer.
- PS.1.6 The Contractor shall ensure that work is performed at an acceptable rate to complete the work within the allocated time. The Contractor shall avoid delays such as, but not limited to, late delivery of material and slow installation rates. It is possible that if the work is not completed within allocated times, the infrastructure may be taken back and put into service and then the next available time may be uncertain.

PS.2 Outages

- PS.2.1 The Employer does not guarantee the removal from service of any existing overhead transmission lines for the execution of the scope of work. Every attempt shall be made to make the plant available for the planned work, however the final decision shall be made by the Network Control Centre. To minimise the impact on the Contractor, the Contractor shall submit a programme and the outage requests timeously. The lead times for outage requests shall be determined by the Employer and the Contractor shall factor this into the programme. Should the Employer be in a position whereby he cannot allow outages and hence cannot grant access to site/ permit to work

on the line, the Contractor shall be obliged to alter his programme with respect to selection of lines for work to be done. Where a line cannot be taken out for work execution, this line will be removed from the scope of work, without any claims for costs by the Contractor.

PS.2.2 The Contractor shall compile and submit an outage contingency plan for outage related work on components of the power system. If such work affects the functioning of any communication link, such as the OPGW link, or if work is to be done on the OPGW or the optical fibre cores, to the extent that it may have to be decommissioned, the Contractor shall submit a separate outage contingency plan for the affected communication link.

PS.2.3 The outage contingency plans shall include the outage requirements for affected crossings which shall be identified by the Contractor. All outage requirements shall be submitted to the Employer's Agent or Representative who shall consult with and obtain approval from the Network Control Centre.

PS.2.4 The Contractor is required to work closely with the Employer's Agent or Representative for effective outage planning and work execution. A reasonable outage notification period is required to give the Network Control Centre time to analyse the impact of the outage, plan the reconfiguration the network and to notify relevant stakeholders. The scheduling of outages shall be at the discretion of the Employer. The Employer's Agent will inform the Contractor of the minimum period of request for which an outage can be granted. The Contractor's proposed work program shall be submitted to the Employer's Agent for approval prior to the Contractor starting any work. This program shall also indicate the materials delivery and requirement dates.

PS.3 Crossings

PS.3.1 The Contractor shall compile and submit a crossing plan as may be required by the responsible authority.

PS.3.2 The Contractor shall comply with all statutory and other requirements as specified in the General Technical Specification.

PS.3.3 Work at line crossings of roads, railways, communications lines, and other power lines shall also comply with the requirements of the responsible authority.

PS.3.4 The Contractor shall ascertain if there is any road crossing and railway crossing which could pose challenges during conductor re-stringing and to provide mitigation measures.

PS.3.5 When stringing, removal or installation of insulator and/or assemblies, de-tensioning and/or re-tensioning is performed for sections crossing other infrastructure, such as telecommunications lines, roads, buildings, etc., all necessary construction precautions shall be taken, such as the use of H-poles, nets, warning signs, flagmen, etc. Payment shall be made for the installation/ dismantling of H-poles, supply and installation of nets, use of flagmen, superintendence by safety officer, from the respective provisional sum item in the **Bill of Quantities**.

PS.3.6 The Contractor shall ensure that all road crossings are manned by flagmen while the pilot wires and/or conductor is being pulled. All major road crossings shall have wooden H-Poles installed on both sides of the crossing or apply other effective methods where H-poles are not feasible, as an added safety precaution over and above the presence of the flagmen.

PS.3.7 The Contractor shall in collaboration with the Employer's Agent ensure that all MV and LV lines crossing under the line are switched off on the day when dismantling/ pulling of conductor and removal/ fitment of insulator assemblies is performed.

PS.3.8 The Contractor shall liaise with local traffic authorities where dismantling/ pulling of conductors or

removal/ fitment of insulator assemblies is to be performed across major road crossings. The Contractor shall also notify the railway authorities for similar work to be performed over railway lines. The work at crossings shall only take place upon receipt of all the necessary approvals.

PS.4 Underground Services

PS.4.1 Types of Underground Services

PS.4.1.1 Various type of underground services could be within the vicinity of the works, such as:

- (1) Electrical power cables including high voltage, low voltage, street lighting, domestic connections cables.
- (2) Communication cables such as copper cables, CCTV cables, and optical fibre cables.
- (3) Water, sewer, and stormwater pipes.

PS.4.2 Proving Underground Services

PS.4.2.1 The Contractor shall make himself acquainted with the position of all existing services before any excavation or other work likely to affect the existing services is commenced. It is stressed that all services in a particular area must be proven before commencing work in that area.

PS.4.2.2 Prior to commencing construction activities in a particular area, the Contractor shall also diligently enquire of local landowners as to whether there are any other known services which have not been shown on the drawings, but which may be affected by the construction activities in that area, and any such services shall be brought to the attention of the Employers' Agent immediately.

PS.4.2.3 Insofar as excavation works 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 rate for the particular excavation work.

PS.4.2.4 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. Payment for the cost of this additional searching shall be made under the respective provisional sum item in the **Bill of Quantities**.

PS.4.2.5 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.

PS.4.2.6 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, the Contractor shall refer this matter to the Employer's Agent for further action.

PS.4.2.7 It should be noted that 33,000 Volt and 132,000 Volt cables may only be exposed by 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 eThekweni Electricity shall be contacted immediately.

PS.4.2.8 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.

PS.4.3 Relocation of Existing Services

PS.4.3.1 The laying, relocation and jointing of all underground services will be carried out by the relevant asset owner, 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.4.3.2 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 Employer's Agent who will arrange for the work to be carried out at no cost to the Contractor.

PS.5 Management of the Environment

PS.5.1 Natural Vegetation

PS.5.1.1 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.

PS.5.1.2 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 Employer's Agent.

PS.5.2 Fires

PS.5.2.1 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 a 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.5.3 Environmental Management Plan

PS.5.3.1 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.5.4 Environmental Constraints

PS.5.4.1 Various environmental constraints will apply to most sections of work in this contract and the Contractor will be expected to comply with all reasonable requirements or instructions imposed on that account.

PS.5.4.2 Such constraints will be contained in a formal Environmental Management Plan (EMP) drawn up by the Environmental Management Practitioner. Such a plan will be:

- (1) General, in so far as it deals with subjects such as access to and from site, excavation work, noise, air pollution, disturbance to residents, surface water, and waste disposal.
- (2) Specific in so far as it identifies aspects such as endangered flora and fauna, aesthetically sensitive areas, and sensitive community issues.
- (3) Prescriptive, in that it specifies exactly what actions are needed by the Contractor in each section of work to ensure that the following objectives are achieved, and requirements met:
 - (a) Erosion control on access roads, footpaths, and disturbed areas of land.
 - (b) Bush clearing and tree felling, particularly where indigenous species are involved.

- (c) Preservation of endangered species of flora and sensitive vegetation by removal and replanting.
- (d) Stockpiling of topsoil.
- (e) Ripping, seeding, and replanting of disturbed areas as part of objective (a).
- (f) Construction of berms and drains to control the run-off storm water from access roads and footpaths.
- (g) Erosion control at tower bases subject to the action of running water by means of gabions, retaining walls, etc.
- (h) Precautionary measures in areas designated as nature reserves to avoid disturbance to flora and fauna.
- (i) Notifying residents of intention to work on or adjacent to their properties or to gain access to the work site over their properties.
- (j) Taking appropriate steps to prevent damage to private property, and in conjunction with the Employer's Agent and the Employer, establishing the amount of compensation payable for unavoidable damage.
- (k) Identifying sugarcane to be cut into crops to be harvested before work commences, to minimise or avoid loss or damage to same while work in progress. Such cutting or harvesting would normally be done by the landowner or his agent and not by the line Contractor.

PS.5.4.3 In addition to the above, all requirements according to the Employer's Generic Environmental Management Specifications as detailed in **C3.4: Particular Specifications**, will be adhered to.

PS.5.5 Material Compliance

PS.5.5.1 All materials supplied, and site works shall comply with National Environmental Regulations and the Environmental Management Plan.

PS.5.5.2 Used construction materials, such as but not limited to blast-grit, shall be collected, bagged, and disposed of at a suitable disposal facility.

PS.5.5.3 Dismantled materials from existing plant shall be delivered to the Employer's premises, alternatively to other location with the eThekweni Municipal region.

PS.5.5.4 The cost of this compliance and requirement for the execution of the works shall be included in the price for those items.

PS.5.6 Pricing for Environmental Management

PS.5.6.1 Provisional sums for each section of work shall be provided in the **Bill of Quantities** for compliance to the EMP for the following:

- (1) Bush clearing & vegetation control.
- (2) Access road works.
- (3) General preventative measures not included in the priced items.
- (4) Rehabilitation work.

PS.5.6.2 The Contractor will only be able to claim against those items from the provisional sums by producing, for the approval of the Employer's Agent before any work begins, a detailed cost estimate of that work. The cost estimates and the actual claims shall be based on the daywork rates and/ or at cost plus mark-up for items not in the daywork rates. These are subject to approval by the Employer's Agent prior to actual work commencement.

PS.5.6.3 The Employer is not obliged to spend all or any of the provisional sums appearing in the **Bill of Quantities** and in any event the cost of EMP compliance in any particular section of work shall not exceed the amount of the corresponding provisional sum.

PS.5.6.4 Note that where any particular construction-related activity is prescribed or governed by the laws of South Africa, e.g., the disposal of waste, the prevention of damage to persons and property, etc, it will not be regarded as an activity which attracts additional cost if it is already a requirement in the Employer's Specifications, its compliance is called for in the Environmental Management Specifications and Plan, or it is a statutory requirement.

PS.5.6.5 Contractor's compliance with the EMP will be monitored by the Employer's Agent, Representative and the Environmental Management Practitioner while the work on site is in progress and during any subsequent servitude rehabilitation when such ongoing exercise is required of the Contractor.

PS.5.6.6 The cost of major clearing and construction of erosion control berms and cost of rehabilitation shall be made using the applicable unit rates or under the applicable provisional sum item in the **Bill of Quantities**.

PS.6 Health and Safety

PS.6.1 General Statement

PS.6.1.1 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 subsequent amendments, and the OHS Act 1993 Construction Regulations 2014 issued on 7 February 2014 by the Department of Labour and subsequent amendments.

PS.6.1.2 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.6.2 Employer's Health and Safety Specification

PS.6.2.1 The Employer's Health and Safety Specification is included in **Part C3.4: Particular Specifications**.

PS.6.3 Contractor's Health and Safety File

PS.6.3.1 The Contractor shall provide a suitable and sufficiently documented health and safety file in compliance with the Occupational, Health and Safety Act and Regulations, No. 85 of 1993, as amended, and the Employer's Health and Safety Specifications. The file shall be updated as and when changes are made and will be applied from the date of commencement and for the duration of the construction work.

PS.6.3.2 The Contractor shall submit a detailed health and safety file which will take into consideration the site-specific risks and must cover and include at least the following:

- (1) 37.2 Agreement.
- (2) Notification of Construction Work and/or Construction Work Permit; (permit to be obtained from Client).
- (3) Management structure / Organogram.
- (4) "Letter of good standing" with the Compensation Commissioner or licensed compensation insurer for COIDA.
- (5) Health and Safety Plan.
- (6) Fall Protection Plan.
- (7) Details of the competent persons required as per specifications and those he intends to

appoint for the construction works in terms of Construction Regulation 8 and other applicable regulations.

- (8) Appointment letters, medical certificates of fitness, health and safety related training and competencies, specific certificates required for the various tasks to be undertaken, such as working at heights certificates.
- (9) List of Contractors (Subcontractors) including copies of the agreements between the parties and the type of work being done by each Contractor.
- (10) Designs and drawings, as per work requirements.
- (11) Occupational health and safety programme agreed with Client including the underpinning the Activities, Hazard Identification, Risk Assessment, and Mitigation Control and Monitoring Measures.
- (12) Provision of a safe working environment and equipment.
- (13) 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.
- (14) Registers, such as for induction training, site inspections, vehicle, and tool checks.
- (15) 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.
- (16) Incident Management Procedure.
- (17) Details of methods to ensure that his Health and Safety Plan is carried out effectively in accordance with the Construction Regulations 2014 and amendments.

PS.6.3.3 The Contractor's Health and Safety File, containing items indicated above, shall 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.

PS.6.3.4 Time lost due to delayed commencement or suspension of the work because 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.

PS.6.3.5 A generic Health and Safety File and/or generic Health and Safety Plans will not be acceptable.

PS.6.4 Cost of Compliance with the OHSA Construction Regulations

PS.6.4.1 The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, as amended, 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/or in the Employer's Health and Safety Specification.

PS.7 Responsibility on Site

PS.7.1 No staff of or other personnel representing the Contractor shall be allowed to work on site or enter eThekweni Electricity substations unless they are in direct control of a Competent Person, such as a Suitably Qualified and Specifically Trained Person. The Competent Person shall be a person who is employed by the Contractor and who has passed eThekweni Electricity Safety Rules Course and has been tested by an authorised person from eThekweni Electricity.

PS.7.2 Although the work may be monitored, inspected and/or scrutinised by qualified representatives of eThekweni Electricity, this will in no way will relieve the Contractor of its professional responsibility for the proper and prompt execution of the duties.

PS.7.3 All the necessary precautions shall be taken to ensure that no harm and/or damage is

encountered by the public and/or third parties.

PS.8 Methods Statements

PS.8.1 The Contractor shall provide specific method statement/s for each type of activity. Some of the method statements are as per list below:

- (1) Grit-blast cleaning of tower/ structure steel, which shall include containment, collection, and removal of spent grit from site.
- (2) Grit-blast cleaning of bolt clusters/ fasteners.
- (3) Replacement of tower steel and fasteners.
- (4) Cleaning and painting of the towers/ structures, including covering of insulators and devices on towers.
- (5) Foundation refurbishment.
- (6) Fitment of anti-climb devices.
- (7) Refurbishment of jumper connections.
- (8) Cleaning and painting (or sealing) of dead-end eyes.

PS.8.2 The method statements shall be compiled by suitably qualified and skilled persons, including the Contractor's Health and Safety personnel.

PS.8.3 The format shall be agreed upon by the Contractor and the Employers' Agent. It shall include the detailed work procedures, list of tools and equipment to be used, hazard identification and risk assessment, and an organogram for the specific activities.

PS.8.4 The method statements are subject to acceptance by the Employers' Agent. This acceptance shall not relieve the Contractor of his responsibility to ensure that proper and safe work practices are followed for the execution of the work.

PS.9 Quality Control

PS.9.1 The Contractor shall provide specific quality control forms for each type of activity. Painting quality control and assurance tests shall be done as per the Painting Specification.

PS.9.2 Some of the inspections and tests are as per list below:

- (1) Steel structure condition data.
- (2) Steelwork and fastener replacement.
- (3) Sellotape cleanliness test.
- (4) Cross-cut and cross-hatch adhesion test.
- (5) Coating pull-off test.
- (6) Paint (wet and dry) film thickness test during the various stages of the refurbishment process.
- (7) Cleaning and coating inspections.
- (8) Tower/ gantry footing resistance measurements.
- (9) Foundation refurbishment.
- (10) Cleaning and coating of stubs, foundation top and earthing
- (11) Fitment of tower accessories.

PS.10 Drawings

PS.10.1 General Requirements

PS.10.1.1 All drawings shall be to scale and fully detailed. All the important dimensions shall be given and the material of which each part is to be constructed shall be indicated. Drawings shall not exceed 700 mm in one dimension and shall bear approved Contract references. All descriptions on drawing shall be in English.

PS.10.1.2 Tower drawings (outline, sections, steel members) shall include on each sheet: the member number, dimensions, quantity, unit mass, total mass for the particular size. It shall also include details of the fasteners for that particular section (size, grade, length, unit weight, total weight).

PS.10.1.3 Drawings for approval shall be submitted in hard copy and electronic format. The hardcopy shall be in duplicate as black line prints on a light background and, after having been approved, the Contractor shall supply any further copies required by Employer's Agent. Upon completion of the Contract, the Contractor shall supply further copies as required by the Employer, one of which shall be reproductive black line print on approved transparent material. Refer to the General Technical Specifications for further requirements.

PS.10.1.4 Any drawing modified from a previously submitted drawing shall bear a reference to the revision.

PS.10.1.5 All detail drawings submitted for approval shall be to a scale not less than 1:25; arrangement drawing shall be to a scale not less than 1:50.

PS.10.2 Drawing Specifications

PS.10.2.1 A list of drawings forming part of the specification is supplied as additional information with the Technical Specifications.

PS.10.3 Tender Drawings

PS.10.3.1 Drawings required as part of the tender submission are listed in the Returnable Schedules.

PS.10.4 Drawings for Approval

PS.10.4.1 Detail drawings (whichever are applicable to the awarded scope of work) are to be submitted by the Contractor for approval, within four weeks from the commencement date.

PS.10.4.2 Detail drawings at commencement of contract include the following:

- (1) Each type of standard tower and extension showing foundations, details of insulators and earth conductor attachment fittings, giving total steelwork masses above and below ground, complete with all necessary erection information.
- (2) Live metal clearance diagrams for each type of standard tower.
- (3) Stress diagrams and calculations for each type of standard tower and extension, (new designs) special towers, extensions, and foundations (as required), including non-standard cross-arms for terminal towers.
- (4) Foundation drawings, including rebar requirements and arrangements.
- (5) Suspension and tension insulator assembly component drawings.
- (6) Insulator units, showing cross section and details of securing pins.
- (7) Phase conductor tension and suspension clamps.
- (8) Earthwire and OPGW strain and suspension clamps, tower bonding components, joint box, duct pipe, patch panel.
- (9) Phase conductor, earthwire and OPGW vibration dampers.
- (10) Phase conductor tension and non-tension joints and repair sleeves.
- (11) Bi-metal connectors.
- (12) Counterpoise connections.
- (13) Danger and property, route and number, phase and circuit labels.
- (14) Sag and tension tables for conductor stringing at different span lengths and temperature range.
- (15) Tower schedules and profile drawings.
- (16) Structure list detailing material used on each tower.

PS.10.5 Drawings for Construction

- PS.10.5.1 Detail drawings (whichever are applicable to the awarded scope of work) are to be compiled and provided to the on-site teams for refurbishment and/or constructions purposes. A copy shall be submitted to the Employer's Agent.

PS.10.6 'As-built' Survey Data

- PS.10.6.1 Where applicable, upon completion of the work, if instructed by the Employer's Agent, the Contractor shall engage the services of a registered land surveyor who shall determine and record the following 'as-built' information about the transmission line by means of field measurement:

- (1) The X and Y coordinates of each tower position, and the datum (Z) above mean sea level of the centre of the tower base.
- (2) The X and Y coordinates of each leg of each tower at ground level, and the datum (Z) above sea level of each tower leg at its point of entry into the ground.
- (3) The X, Y and Z coordinates of each end of:
 - (a) The lowest crossarm of the double circuit towers.
 - (b) The bottom or only crossarm of the single circuit towers.

Z being the datum above mean sea level of the underside of that crossarm.

- PS.10.6.2 The information obtained for the item above shall be recorded on the line profile drawing, as shall be the tower number allocated by eThekweni Electricity. Alternatively, where the contractor is not responsible to provide the line profile, it shall be recorded and presented in the form of Schedules, the format of which shall be agreed with the Employer's Agent.

- PS.10.6.3 Payment for the survey work shall be made under the provisional sum item in the **Bill of Quantities**.

- PS.10.6.4 The Employer may decide to engage the services of a land surveyor directly or via its Consultant, in which case the data shall be provided to the Contractor who shall then complete all the as-built documentation.

PS.11 Testing of Materials and Measurements

PS.11.1 General Requirements

- PS.11.1.1 The Manufacturers shall be responsible for performing or for having performed all the required tests specified under the specification for all materials. Tenderers shall confirm the Manufacturer's capabilities in this regard when submitting tenders. Any limitations shall be clearly specified.

- PS.11.1.2 Type test reports and certificates shall be certified by the National Standards and Testing Authority (NSTA) of the country of origin. Where a body other than the National Standards and Testing Authority is used to certify the type test reports, a copy of the certificate of accreditation shall be attached. The current contact details of the testing and certification authority shall be provided at the time of tendering.

- PS.11.1.3 Upon completion of the manufacturing process, routine tests shall be carried out as per the respective standards for each equipment and the results endorsed by the NSTA of the country of manufacture or the accredited body.

- PS.11.1.4 The Contractor shall carry out at his own expense all tests necessary to ensure the satisfactory design and manufacture of components in accordance with the relevant standards.

- PS.11.1.5 Test reports shall be made available to the Employer. The Contractor shall bear the cost of the tests and for furnishing the records and reports.
- PS.11.1.6 Not less than seven days' notice for all local tests (in South Africa) shall be given to the Employer's Agent in order that the Employer may be represented if deemed necessary. As many tests, as in the opinion of the Employer's Agent are possible, shall be arranged together. Full copies of the records of all tests shall be furnished to the Employer's Agent (electronic and hard copies).
- PS.11.1.7 All material which is specified for testing at the Manufacturer's Works shall satisfactorily pass such tests before being packaged. All instruments shall be approved and shall, if required by the Employer's Agent, be calibrated at the expense of the Contractor by an approved authority.

PS.11.2 Tests Required

- PS.11.2.1 The following tests shall be carried out in order to determine whether the materials and apparatus comply with the Specification:

- (1) Tests to be carried out at the Manufacturer's Works (unless otherwise specified or approved):
 - (a) Towers and Metal Fittings for Towers- Type and Sample Tests.
 - (b) Zinc Coating- Sample Tests.
- (2) Tests to be carried out on site:
 - (a) Concrete slump tests.
 - (b) Concrete cube tests – prepared on site and sent to lab for testing.
 - (c) Tower footing resistance tests.
 - (d) Tests as per Painting Specification, including testing to determine existing paint type.

Such tests may be required by the Employer's Agent to prove compliance with the Specification independently of any tests which may already have been carried out.

PS.11.3 Zinc Coatings

- PS.11.3.1 Samples selected by the Employer's Agent of all zinc coated material shall, unless otherwise approved, be subjected to the following tests:
- (a) For material other than wires, the tests specified in SANS 121 as applicable, amended in respect of thickness of coating.
 - (b) For wires, the tests specified in SANS 935 and SANS 182-5.

PS.11.4 Material Samples

- PS.11.4.1 The Contractor shall submit samples of material as required, from time to time, by the Employer's Agent.

PS.11.5 Tower Footing Resistance Measurements

- PS.11.5.1 For new lines and towers, the footing resistance of each tower shall be measured before installation of the OPGW and/or earthwire, using a high frequency (20 kHz) tester. This measurement shall be taken both with and without the earthing system connected.
- PS.11.5.2 For existing lines and towers, the footing resistance of each tower shall be measured with the OPGW and/or earthwire connected, using a high frequency (20 kHz) tester which isolates the parallel transmission tower earth. This measurement shall be taken both with and without the earthing system connected to the tower leg.

PS.11.5.3 Payment shall be made using the applicable rates (if these exist), alternatively from the provisional sums.

PS.11.6 Measurements and Clearance Checks

PS.11.6.1 The Contractor shall carry out such measurements where these are required as part of the work procedure, such as but not limited to measurements of the foundation sizes and heights, measurements of the connecting length of existing and replacement insulator assemblies, and measurements of actual sag and tension values.

PS.11.6.2 The Contractor shall carry out other measurements as may be requested by the Employer's Agent to prove that statutory or specified clearance requirements are complied with and keep a record of the design and as-built measurement values.

PS.11.6.3 The record of all on-site tests, measurements, clearance checks done during the execution of the works shall be submitted with the as-built/ close-out documentation. Failure to provide these shall mean that the Contractor will have to redo the tests, measurements, and clearance checks, in order to obtain the handing-over certificate/s.

PS.12 Documentation During and After Execution of Work

PS.12.1 Immediately after contract award, the Contractor shall submit a detailed works programme, taking cognizance of the Employer's programme requirements, outage constraints, crossings constraints and weather factors. This shall be subject to approval by the Employer's Agent.

PS.12.2 Prior to commencement of the work or sections of work, the Contractor shall submit a schedule detailing the materials and procedures to be applied for each project. Since there are a variety of options, particularly with respect to paints, the Contractor and Employer's Agent shall agree on the most suitable options, and only once this is accepted shall the Contractor procure the relevant materials.

PS.12.3 Where there is a requirement to engage 3rd parties who are supplying materials and involved with quality control on site, such as the paint suppliers, they will also provide documentation to the Contractor, and attend meeting as may be required by the Employer's Agent.

PS.12.4 The Contractor shall submit all as-built/ close-out documentation immediately after the completion of work on a particular line. This shall include but not limited to the following, as may be applicable:

- (1) Health and safety file.
- (2) Site instructions.
- (3) Inspection photos and reports before and during work execution.
- (4) Method statements.
- (5) Quality inspection and test sheets duly completed and signed.
- (6) Test results such as fibre tests, concrete cube and slump tests, assembly tests, etc.
- (7) Component and assembly drawings.
- (8) Material documents, delivery and disposal notes, reconciliation schedules, datasheets, etc.
- (9) Material schedules- as installed per tower or per span.
- (10) Installation schedules per tower or per span.
- (11) Sag and tension tables.
- (12) Design documentation, such as PLS-CADD files.
- (13) Invoice documents, being the invoices, bill of quantities, contract participation goal schedules, labour schedules and other support documents submitted with the invoices.
- (14) Snag list (including outstanding work and defects) with plan to remedy defects.

PS.12.5 Handing-over certificates shall only be signed after as-built/ close-out documents are submitted by the Contractor and accepted by the Employer's Agent, there is no outstanding work that must

still be done by the Contractor, the defects are of a minor nature, and the Contractor has put in plans for the remedial work acceptable by the Employer's Agent.

PS.13 Procedure for the Return of Dismantled Materials

PS.13.1 Where materials are dismantled or removed from service in the course of this contract, the onus is on the Contractor to store and safeguard such material until such time as it has been returned to the Employer or delivered to a recipient nominated by the Employer. Material most commonly encountered in this category on overhead line refurbishment contracts are tower steelwork, fittings, and stranded conductors.

PS.13.2 The standard procedure for disposal of this material at the present time is as follows:

- (1) The materials are to be separated as follows:
 - (a) AAAC conductor.
 - (b) ACSR conductor.
 - (c) Mild steel and fasteners.
 - (d) Insulators.
 - (e) Metallic hardware.
 - (f) Non-metallic hardware, such as spiral vibration dampers.
- (2) The materials are to be delivered to eThekweni Electricity's Springfield depot where it is to be weighed before being off-loaded. Contractor to provide offloading facility. Alternatively, when the weighing facility at Springfield depot is not available, and as instructed by the Employer's Agent, the materials may be weighed at an outside facility and delivered to the Springfield depot.
- (3) During the weighing and delivery of the materials, the Contractor shall ensure that the Employer's representative is in attendance.
- (4) The amount and description of the material is entered by the eThekweni Electricity official in the Goods for Disposal (GFD) book. The Contractor is issued with the GFD slip at the outset of the contract and it must always remain in his possession as it is a counterfoil record and proof of his having delivered the materials to eThekweni Electricity. Each delivery must be entered on a separate page of the GFD book.

PS.13.3 The onus is on the Contractor's site representative to satisfy himself, on a regular basis that the entries in the GFD agree in all respects (e.g., date, description, and quantity) with what has been dispatched from site. Any apparent discrepancies should be reported to the Employer's Agent immediately.

PS.13.4 The expected quantities of material to be returned will be determined by calculation by the Employer's Agent or his representative and at the end of the contract these will be compared with the actual returns extracted from the GFD.

PS.13.5 The Employer reserves the right to recover the scrap value of any shortfall in material from the Contractor, this value being calculated at the rates in the ruling contracts between the Employer and private scrap merchant(s) at the time of the final quantity reconciliation.

PS.14 Site Security

PS.14.1 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, and the cost of such shall be included in the price for the works.

PS.14.2 Site Security, in conjunction with the SAPS (where necessary), shall be responsible for removal of disruptive elements, that may interrupt the progress of the contract through acts such as, but not limited to, intimidation, threats of disruption, violent disruption, or criminal and illegal activity by the local community or independent organisations or entities that may result in slowing down or partial or total stoppage of the works. Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**.

PS.14.3 For work using the priced rates in the Price Schedule, the Contractor shall provide security at his own cost. For work using time-based (daywork) rates and/or 3rd parties at Cost plus mark-up, the cost of security, if needed, shall be for the Employer's account. Payment for this shall be made from the respective provisional sum in the **Bill of Quantities**. Any extra cost of this security services due to any delays on the part of the Contractor in executing the works, excluding inclement weather, shall be for the Contractor's account.

PS.15 Performance Monitoring of the Contractor

PS.15.1 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 Clause 53 of the SCM Policy).

PS.15.2 Appropriate key performance indicators (KPIs) shall be applied for the contract by the Employer as a yardstick for measuring performance.

PS.15.3 The following KPIs will be applicable to this contract, and this will vary according to the various stages of the contract:

- (1) Personnel for management of contract and execution of works- quantity, qualifications, experience, competency, technical and management support.
- (2) Plant, tools, and construction equipment- quantity, quality, and capacity.
- (3) Materials for Works, including documentation thereof, ordering, quality of materials, timeous provision for site works, waste disposal, and reconciliations.
- (4) Health and Safety File.
- (5) Engagement of subcontractors as per CPG requirements.
- (6) Engagement of local labour as per contract requirements.
- (7) Documentation management and proper use thereof, including method statements, QC documents, quality inspection and test plans (QITPs), measurements on site and the recording of such.
- (8) Quality of Workmanship.
- (9) Management of the environment.
- (10) Construction Programme.
- (11) Notifications relating to performance issues such as non-conformances, non-compliances, incidents on site.
- (12) Invoicing submission, adequacy of support documents, correctness of documents.
- (13) Close-out/ As-built documentation submission for completed works, (including all drawings, inspection photos, all QITPs for work completed, test results (such as fibre tests, concrete, paint, etc...), material reconciliation schedules, as-built material labour schedules, delivery notes, method statements, final BoQs, refurbishment and maintenance schedules (such as paint, bird-guards, ACD etc...), sag and tension charts, PLS-CADD designs (where applicable), invoicing and support documentation, etc...).

C3.3: STANDARD SPECIFICATIONS

C3.3.1 STANDARD TECHNICAL SPECIFICATIONS AND INSTRUCTIONS

- (1) General technical specification for supply, delivery, and erection of materials for 132 kV and 275 kV steel lattice power lines.
- (2) General technical specification for painting of galvanized steel lattice structures.

These documents are attached at the end of the tender document.

C3.3.2 AMENDMENTS TO THE STANDARD SPECIFICATIONS

Currently, there are no amendments to the Standard Specifications.

C3.4: PARTICULAR SPECIFICATIONS

C3.4.1 In addition to the Standard Technical and Project Specifications the following Particular Specifications shall apply to this contract, namely:

- (1) Environmental Management Specification.
- (2) Health and Safety Specification.
- (3) Baseline Risk Assessment.
- (4) Covid-19 Health and Safety Specification.

These documents are attached at the end of the tender document.

C3.5: CONTRACT AND STANDARD DRAWINGS

C3.5.1 CONTRACT DRAWINGS / DETAILS

There are no contract drawings / details.

C3.5.2 STANDARD DRAWINGS

There are no standard drawings.

C3.6: ANNEXURES

There are no Annexures.

PART C4: SITE INFORMATION

C4.1 LOCALITY PLAN

C4.1.1 **Locality plans:** There are no locality plans.

C4.1.2 **Tower schedules:**

C4.1.2.1 **Typical tower schedule**

Line:		Parlock-Umgeni 132kV							Sheet No:	1
Section:		T1-T33							Revision No:	0
Line Length:		9236 metres							Date:	2023-10-11
Tower Type:		Steel lattice; double circuit							Prepared by:	
Profile Drawing:									Checked by:	
Phase conductor:		Twin Elm								
Earthwire: / OPGW		Cct 1 = Oak equivalent OPGW Cct 2 = Oak equivalent OPGW								
Orientation of Circuits:		Cct 1 = RHS; Cct 2 = LHS								
Design Temp:		75 deg								

TOWER											REMARKS (CROSSINGS) at ahead span
NO.	TYPE	DESIGNER CODE	COND. ATTACH. TYPE	BODY EXT. (m)	Mass of tower (kg)	Steel Surface Area (m²)	Previously painted	DEVIATION ANGLE (DMS)	SPAN AHEAD (m)	LINE CHAINAGE (m)	
Gantry	Gantry								20.00		
1	2DT	2214	Strain		13519	473	No	-	207.43	207.43	
2	2D90	2214	Strain		13519	473	No	46°6'36"L	319.83	527.26	
3	2D	2211	Susp		4281	150	No	-	304.35	831.61	
4	2D	2211	Susp		4281	150	No	-	264.03	1095.64	Overhead streetlight cable, Road crossing-(rock hill drive)
5	2D	2211	Susp		4281	150	No	-	87.56	1183.20	
6	2D30	2212	Strain		7354	257	No	7°3'0"R	83.69	1266.89	Road crossing-(Royalhill Rd), informal sttlements
7	2D60	2213	Strain		10579	370	No	66°17'24"L	401.42	1668.31	
8	2DE3	2211	Susp	3	5223	183	No	-	148.28	1816.59	Road crossing-(Gardernhill Rd)
9	2D30E6	2212	Strain	6	11141	390	No	-	540.04	2356.63	River crossing
10	2D60	2213	Strain		11071	387	No	41°6'15.48"R	123.26	2479.89	
11	2D	2211	Susp		4281	150	No	-	147.41	2627.30	
12	2DE6	2211	Susp	6	5662	198	No	-	324.38	2951.68	
13	2DE3	2211	Susp	3	5223	183	No	-	232.31	3183.99	
14	2DE3	2211	Susp	3	5223	183	No	-	95.80	3279.79	
15	2D30E3	2212	Strain	3	9449	331	No	3°49'26.4"L	551.79	3831.58	Road crossing-(Shannon Dr)
16	2DE6	2211	Susp	6	5662	198	No	-	137.40	3968.98	Road crossing-(Annet Dr)
17	2D	2211	Susp		4281	150	No	-	135.38	4104.36	
18	2D90		Strain		19230	673	Yes	72°41'49.56"L	463.23	4567.59	
19	2D30		Strain		10145	355	Yes	-	427.20	4994.79	
20	2D60		Strain		14865	520	Yes	54°8'57.84"R	396.79	5391.58	
21	2D30		Strain		10145	355	Yes	25°7'28.56"L	315.40	5706.98	
22	2DE6		Strain	6	23684	829	Yes	-	289.82	5996.80	
23	2D30		Strain		23684	829	Yes	-	429.88	6426.68	Informal sttlements
24	2D30		Strain		17760	622	Yes	-	420.61	6847.29	
25	2D60		Strain		14865	520	Yes	33°30'10.44"R	481.67	7328.96	
26	2DE6		Susp	6	6605	231	Yes	-	231.94	7560.90	
27	2DE3		Susp	3	10260	359	Yes	-	363.18	7924.08	
28	2D		Susp		6605	231	Yes	-	290.06	8214.14	Road crossing-(Rodger Sishi Rd)
29	2D		Susp		6605	231	Yes	-	286.48	8500.62	Formal settlements-road crossing (Goshawk Rd)
30	2D		Susp		6605	231	Yes	-	201.19	8701.81	Formal settlements-road crossing (Goshawk Rd)
31	2D60		Strain		15211	532	Yes	42°47'17.88"L	281.21	8983.02	Formal settlements-road crossing (Goshawk Rd)
32	2DE3		Susp	3	10000	350	Yes	-	207.63	9190.65	Major road crossing-(M5-Otto Volek Rd)
33	2DT		Strain		19230	673	Yes	22°30'24.48"R	26.00		Structure in the Sub (Umgeni)
Gantry	Gantry										
	TOTAL				340 529	11 919			9236.65		

C4.2 CONDITIONS ON SITE

C4.2.1 Access and possession of site:

- C4.2.1.1 By design, power lines are capable of operating whilst construction and/ or maintenance work is performed on these items. For operational reasons, i.e., to ensure continuity of power supply to customers where necessary, the power lines shall remain partially or fully energised whilst the Contractor executes the scope of work in a sufficiently safe manner. The work permit and/or access to site certificate shall indicate the extent to which the Contractor is allowed to work on the plant.
- C4.2.1.2 Due to some parts or the whole of the power lines being energised during the execution of the scope of work by the Contractor, the Employer or other persons appointed by the Employer may require access to these plants. The Contractor will then have to work in conjunction with such others.
- C4.2.1.3 In cases where the whole or part of the plant is decommissioned for maintenance and/or construction works, the Employer may appoint more than one Contractor and/or other persons to work simultaneously on the same plant to expedite the completion of the works, however, they would not have to work on the same component at the same time.

C4.3 TEST RESULTS

There are no specific test results.