

GREATER TZANEEN MUNICIPALITY



BID DOCUMENT

**BID DESCRIPTION: SUPPLY, INSTALL AND COMMISSION SCADA SYSTEM ON THE GTM ELECTRICAL NETWORK IN PHASES
PHASE 2 – INSTALLATION AND COMMISSIONING OF FREE ISSUE SCADA EQUIPMENT AND OTHER WORKS**

BID NUMBER: SCMU 22/2025

NAME OF THE BIDDER:.....

.....

BID AMOUNT INCLUSIVE OF VAT: R......

36 MONTHS AS AND WHEN REQUIRED

CLOSING DATE: 21 JULY 2025 @ 12H00

A Green, Healthy, Prosperous and United Municipality that Provides Quality Services to All

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PART A: MBD1



GREATER TZANEEN MUNICIPALITY
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MASEPALA WA TZANEEN



SUPPLY CHAIN MANAGEMENT UNIT

DEPARTMENT: ELECTRICAL ENGINEERING SERVICES

BID DESCRIPTION:

SUPPLY, INSTALL AND COMMISSION SCADA SYSTEM ON THE GTM ELECTRICAL NETWORK IN PHASES: PHASE 2 – INSTALLATION AND COMMISSIONING OF FREE ISSUE SCADA EQUIPMENT AND OTHER WORKS

BID NO: SCMU 22/2025

Bids are hereby invited from interested service providers for **SUPPLY, INSTALL AND COMMISSION SCADA SYSTEM ON THE GTM ELECTRICAL NETWORK IN PHASES: PHASE 2 – INSTALLATION AND COMMISSIONING OF FREE ISSUE SCADA EQUIPMENT AND OTHER WORKS**. Bid documents are obtainable at the Municipal website (www.greatertzaneen.gov.za), Etenders and Supply Chain Offices; Agatha Street, **upon a non-refundable fee of R2000.00 or deposited to the following banking details: Greater Tzaneen Municipality; Absa Bank; Account no:4051444332 reference number please write the name of the company and bid Number.**

STAGE 1: MANDATORY REQUIREMENTS

NB: BIDDERS MUST PROVIDE PROOF OF THE FOLLOWING TO AVOID DISQUALIFICATION:

- Proof of purchase for tender document, including downloaded tender documents (attach receipt) EFT or Manually
- Bidders work experience: Attach Appointment letters, Completion certificates and recommendation or reference letters in relation to the field signed and stamped by the institution
- Key personnel experience and Qualifications
- Proof of Plant and Equipment
- CIDB Grading 6EP or Higher
- ECSA Professional Registration (Pr. Eng and/or Pr. Tech Electrical or Software) and SACPCMP
- Company's Audited 3 years Annual Financial Statements signed off by a Professional Accountant/Registered Auditor with a practice number
- Compulsory briefing session

STAGE 2: ADMINISTRATIVE REQUIREMENTS

- Copy of company registration certificate/ documents from CIPC

- Certified ID copies of all directors
- Latest CSD registration summary report
- Copy/ printed Tax compliance status Pin or certificate.
- Municipal rates and taxes for both company and directors appearing in CK (not older than 3 months)
) if the statement of water and lights is not on your names, please attach affidavit commissioned by oath from SAPS supporting your residential addresses as per attached statement or copy of Lease Agreement with 3 Months proof of payment only (No statements); Certified copies of Permission to Occupy (PTO's) land for bidders residing in Tribal Authority's areas of jurisdiction; proof of residence from Traditional Authority
- Joint Venture Agreement signed off by both parties (In case of a Joint Venture)

Completed bid documents with attachments (supporting documents) must be wrapped in a sealed envelope and be deposited into Greater Tzaneen Municipality bid box, Civic Centre, Agatha Street, marked as Bid No: SCMU 22/2025, Postal Address and contact details of the bidder.

Bid document will be available at Supply chain Management office, Etenders and municipal website(www.greatertzaneen.gov.za) on the date of advert.

Advert Publication date: 20 June 2025, Advert Number of days: 32 days. Compulsory Briefing session will be held on 01 July 2025 @10h00 Old fire station, Greater Tzaneen Municipality. Closing date: 21 July 2025 @ 12:00. Public bid opening will take place.

EVALUATION OF BIDS

The Evaluation of the bid will be conducted in two stages; first stage will be assessment on functionality: Relevant company experience – 30 Points; Key Personnel and Qualifications – 40 Points; Proof of Plant and equipment – 10 Points; Technical proposal – 20 Points; Only bidders that obtain 70 points will be subjected to 80/20 Preference point scoring system, where 80 points will be allocated for price only and 20 points will be allocated based on the specific goals points scored.

Bidders shall take note of the following bid conditions:

- a. Greater Tzaneen Municipality Supply Chain Management Policy will apply on this bid.
- b. Specific goals in terms of the preferential procurement regulations 2022 will apply on this bid.
- c. Greater Tzaneen Municipality does not bind itself to accept the lowest or any bid and reserves the right to accept the whole or part of the bid.
- d. Contract period: 36 Months (Risk based)
- e. Council reserves the right to negotiate further conditions with the successful bidder.
- f. Council reserves the right not to appoint.
- g. No bidder will be appointed if not registered on Central Supplier Database.
- h. Late, incomplete, unsigned, faxed or emailed bids will not be accepted.

Technical enquiries should be directed to Mr B.M Sengwayo @015 307 8161

Administrative enquiries relating to the tender be directed to Mrs. Z Ramothwala @ 015 307 8199

Mr. D Mhangwana
Municipal Manager
Greater Tzaneen Municipality

PART B.1: FORM OF BID

Bid for contract number: SCMU 22/2025

I/We, the undersigned: Bid for an amount R..... (VAT inclusive).

- a) Bid to supply and deliver to the Greater Tzaneen Municipality all or any of the supplies of goods described in both Specification and Scheduled of this Contract.
- b) Agree that we will be bound by the specifications, prices, terms and conditions stipulated in those Schedules attached to this bid document, regarding delivery and execution.
- c) Further agree to be bound by those conditions, set out should this bid be accepted in whole or in part.
- d) Confirm that this bid may only be accepted by the Greater Tzaneen Municipality by way of a duly authorized Letter of Acceptance; and,
- e) Declare that we are fully acquainted with the Preferential Procurement Forms and Schedules, and the contents thereof and that we have signed the Schedule of Prices – PART “F” and completed the Preference Points claim Forms attached in Part I, J, K, L and M; N; O”
- f) Declare that the relevant authorised person thereto will initial each page of the bid document and amendment.
- g) Declare that all information provided in respect of the bidder as well as the bid documents submitted are true and correct.
- h) Declare that documentary proof regarding aspects of the bid process or accidental thereto will, when required, be submitted to the satisfaction of the Municipality.

Signed atthis Day of20.....

Signature: _____

Name of Firm: _____

Address: _____

As Witness:

1. Name _____ Date ____/____/____ Signature: _____

2. Name _____ Date ____/____/____ Signature: _____

State in cases where the bidder is a Company, Corporation of Firm by what authority the person signing does so, whether by Articles of Association, Resolution, Power of Attorney or otherwise. I/We the undersigned am/are authorized to enter into this contract on behalf of:

By virtue of _____

Dated _____ a certified copy of which is attached to this bid.

Signature of authorized person: _____

Name of Firm: _____

Postal Address: _____

As witness:

1. Name: _____ Date ____/____/____ Signature: _____

2. Name: _____ Date ____/____/____ Signature: _____

Please Note: The prices at which bids are prepared to supply the goods and materials or perform the services must be placed in the column on the form provided for that purpose. Failure to sign the form of bid and initialling each page of the bid document will result in disqualification of the bidder. Bidders must sign this Form of Bid as well as PART “F,” attached to this bid document and on acceptance of a bid by the Greater Tzaneen Municipality the Conditions of Contracts, Special Conditions, Specifications and Scheduled of prices, attached hereto shall be deemed to be the conditions of Contract between the parties.

Failure to complete all blank spaces in the forms and to attend to the other details mentioned herein will render the bid liable to rejection.

Bank account details of Bidder:

Bank: _____

Branch: _____

Branch Code: _____

Account Number: _____

Type of Account: _____

Proof that municipal account is paid in full to be attached (arrangements made with council will be taken into consideration).

PART B.2: BIDDING INFORMATION

Details of person responsible for bidding process

Name: _____

Contact number: _____

Address of office submitting bid: _____

Telephone: _____

Fax no: _____

E-mail address: _____

Authority for signatory Signatories for close corporation and companies shall confirm their authority by attaching to this form a duly signed and dated copy of the relevant resolution of their members or their board of directors, as the case may be. An example for a company is shown below:

“By resolution of the board of director(s) passed on ____/____/20____

Mr/ Mrs. _____

Has been duly authorized to sign all documents in connection with the bid for Contract No:

And any contract, which may arise therefrom on behalf of: _____

Signed on behalf of the company: _____

In his/her capacity as: _____ Date: ____/____/____

Signature of signatory as witness:

1. Name _____ Date ____/____/____ Signature: _____

2. Name _____ Date ____/____/____ Signature: _____

PART C: GENERAL UNDERTAKINGS BY THE BIDDER

1. DEFINITIONS

- 1.1. “Acceptable bid” means any bid, which in all respects, complies with conditions of bid and specifications as set out in the bid document, including conditions as specified in the Preferential Procurement Policy Framework Act (Act 5 of 2000) and related regulations.
- 1.2. “Chairperson” means the chairperson of the Greater Tzaneen Municipality Bid Adjudication Committee.
- 1.3. “Municipal Manager” means the Accounting Officer or Municipal Manager of the Municipality.
- 1.4. “Committee” refers to the Bid Adjudication Committee.
- 1.5. “Council” refers to Greater Tzaneen Municipality.
- 1.6. “Equity Ownership” refers to the percentage ownership and control, exercised by individuals within an enterprise.
- 1.7. “HDI equity ownership” refers to the percentage of an enterprise, which is owned by individuals, or in the case of a company, the percentage shares that are owned by individuals meeting the requirements of the definition of a HDI.
- 1.8. “Member” means a member of the Bid Adjudication Committee.
- 1.9. “Historically Disadvantaged Individual (HDI)” means a South African citizen- (i) Who, due to the apartheid policy that had been in place, had no franchise in national elections prior to the introduction of the 1983 and 1993 Constitutions; and/or (ii) Who is a female; and/ or (iii) Who has a disability?
- 1.10. “Service providers” refers to the bidders who have been successful in being awarded Council contracts.
- 1.11. “SMMES” (Small, medium and Micro Enterprises) refers to separate and distinct business entities, including co- operative enterprises and NGOs, managed by one owner or more, as defined in the National Small Business (Act 102 of 1996).
- 1.12. “Contract” refers to legally binding agreement between Greater Tzaneen Municipality and the service provider.
- 1.13. “Bid” means a written offer in a prescribed or stipulated form in response to an invitation by the Municipality for the provision of services or goods.
- 1.14. “Contractor” means any natural or legal person whose bid has been accepted by the Council.
- 1.15. “Closing time” means the date and hour specified in the bid documents for the receipt of bids.
- 1.16. “Order” means an official written order issued for the supply of goods or the rendering of a service in accordance with the accepted bid or price quotation.
- 1.17. “Written” or “in writing,” means handwritten in ink or any form of mechanical writing in printed form.
- 1.18. “Functionality” means technical capability, financial and other resource availability that the service provider needs, to successfully and efficiently render the service and/or deliver in accordance with the specifications.

2. INTERPRETATION:

- 2.1. In this agreement clause headings are for convenience and shall not be used in its interpretation and, unless the context clearly indicates a contrary intention: -
- 2.2. Any reference to any statute, regulation or other legislation or official policy shall be a reference to that statute, regulation or other legislation or national policy as at the signature date, and as amended or re-enacted from time to time.
- 2.3. When any number of day(s) is prescribed, such shall be reckoned exclusively of the first and inclusively of the last day, unless the last day falls on a day which is not a business day, in

which case the last day shall be the next succeeding day which is a business day.

- 2.4. Where any term is defined within a particular clause, other than the interpretation clause, that term shall bear the meaning ascribed to it in that clause wherever it is used in this agreement.
3. I/WE HEREBY BID:
 - 3.1. To supply all or any of the supplies and/or to render all or any of the services described in the attached documents Forms, Schedule(s) and/or Annexure(s) to the Greater Tzaneen Municipality.
 - 3.2. On the terms and conditions in accordance with the specifications stipulated in the bid documents (and which shall be taken as part of and incorporated into, this bid).
 - 3.3. At the prices and on the terms regarding time for delivery and/or execution inserted therein.
4. I/WE AGREE FURTHER THAT:
 - 4.1. The offer herein shall remain binding upon me/us and open for acceptance by the Greater Tzaneen Municipality during the validity period indicated and calculated from the closing time of the bid. This bid and its acceptance shall be subject to the terms and conditions contained in the Forms, Schedule(s) and/or Annexure(s) attached hereto with which I am /we are fully acquitted. notwithstanding anything to the contrary in the Form(s), Schedule(s) and /or Annexure(s) attached hereto.
 - 4.2. If I/we withdraw my/our bid within the period for which I/we have agreed that the bid shall remain open for acceptance or fail to fulfil the contract when called upon to do so, the Greater Tzaneen Municipality may, without prejudice to its other rights, agree to the withdrawal of my/our bid or cancel the contract that may have been entered into between me/us and the Municipality.
 - 4.3. In such event, I/we will then pay to the Municipality any additional expenses incurred by the Municipality for having either to accept any less favourable bid or, if new bids have to be invited, the additional expenditure incurred by the invitation of new bids and by the subsequent acceptance of any less favourable bid.
 - 4.4. The Municipality shall also have the right in these circumstances, to recover such additional expenditure by set-off against monies which may be due or become due to me/us under this or any other bid or contract or against any guarantee or deposit that may have been furnished by me/us or on my/our behalf for the due fulfilment of this or any other bid or contract.
 - 4.5. Pending the ascertainment of the amount of such additional expenditure the Municipality may retain such monies, guarantee, or deposit as security for any loss the Municipality may sustain, as determined hereunder, by reason of my/our default.
 - 4.6. Any legal proceedings arising from this bid may in all respects be launched or instituted against me/us and if/we hereby undertake to satisfy fully any sentence or judgment which may be obtained against me/us as a result of such legal proceedings, and I/we undertake to pay the Greater Tzaneen Municipality legal costs on an attorney and own client.
 - 4.7. If my/our bid is accepted that acceptance may be communicated to me/us by letter or facsimiles and that proof of delivery of such acceptance to SA Post Office Ltd or the production of a document confirming that a fax has been sent, shall be treated as delivery to me/us. The law of the Republic of South Africa shall govern the contract created by the acceptance to this bid.
 - 4.8. I/we have satisfied myself/ourselves as to the correctness and validity of this bid, that the price(s) and rate(s) quoted cover all the work/items(s) specified in the bid documents and that the price(s) and rate(s) cover all my/our obligations under a resulting contract and that I/we accept that any mistakes regarding price(s) and calculations will be at my/our risk.
 - 4.9. I/we accept full responsibility for the proper execution and conditions defaulting on me/us under this agreement as the principal(s) liable for the fulfilment of this contract. I/we declare

that I/we have participation/no participation in the submission of any other bid for the supplies/services described in the attached documents.

4.10. If your answer here is yes, please state the names(s) of the other Bid(s) involved.

PART D: GENERAL CONDITIONS OF CONTRACT GENERAL CONDITIONS OF CONTRACT THE NATIONAL TREASURY REPUBLIC OF SOUTH AFRICA

GOVERNMENT PROCUREMENT: GREATER TZANEEN MUNICIPALITY

GENERAL CONDITIONS OF CONTRACT JULY 2010

The purpose of this document is to:

- a) Draw special attention to certain general conditions applicable to government bids, contracts and orders; and
- b) To ensure that clients be familiar with regard to the rights and obligations of all parties involved in doing business with government. In this document words in the singular also mean in the plural and vice versa and words in the masculine also mean in the feminine and neuter. The General Conditions of Contract will form part of all bid documents and may not be amended. Special Conditions of Contract (SCC) relevant to a specific bid, should be compiled separately for every bid (if applicable) and will supplement the General Conditions of Contract. Whenever there is a conflict, the provisions in the SCC shall prevail.

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1. DEFINITIONS

The following terms shall be interpreted as indicated:

- 1.1. "Closing time" means the date and hour specified in the bidding documents for the receipt of bids.
- 1.2. "Contract" means the written agreement entered into between the purchaser and the supplier, as recorded in the contract form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.3. "Contract price" means the price payable to the supplier under the contract for the full and proper performance of his contractual obligations.
- 1.4. "Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution.
- 1.5. "Countervailing duties" are imposed in cases where an enterprise abroad is subsidized by its government and encouraged to market its products internationally.
- 1.6. "Country of origin" means the place where the goods were mined, grown or produced or from which the services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 1.7. "Day" means calendar day.
- 1.8. "Delivery" means delivery in compliance of the conditions of the contract or order.
- 1.9. "Delivery ex stock" means immediate delivery directly from stock actually on hand.
- 1.10. "Delivery into consignees store or to his site" means delivered and unloaded in the specified store or depot or on the specified site in compliance with the conditions of the contract or order, the supplier bearing all risks and charges involved until the supplies are so delivered and a valid receipt is obtained.
- 1.11. "Dumping" occurs when a private enterprise abroad market its goods on own initiative in the RSA at lower prices than that of the country of origin and which have the potential to harm the local industries in the RSA.
- 1.12. "Force majeure" means an event beyond the control of the supplier and not involving the supplier's fault or negligence and not foreseeable. Such events may include, but is not restricted to, acts of the purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.
- 1.13. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of any bidder and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the bidder of the benefits of free and open competition.
- 1.14. "GCC" means the General Conditions of Contract.
- 1.15. "Goods" means all of the equipment, machinery, and/or other materials that the supplier is required to supply to the purchaser under the contract.
- 1.16. "Imported content" means that portion of the bidding price represented by the cost of components, parts or materials which have been or are still to be imported (whether by the supplier or his subcontractors) and which costs are inclusive of the costs abroad, plus freight and other direct importation costs such as landing costs, dock dues, import duty, sales duty or other similar tax or duty at the South African place of entry as well as transportation and handling charges to the factory in the Republic where the supplies covered by the bid will be

manufactured.

- 1.17. “Local content” means that portion of the bidding price which is not included in the imported content provided that local manufacture does take place.
- 1.18. “Manufacture” means the production of products in a factory using labour, materials, components and machinery and includes other related value-adding activities.
- 1.19. “Order” means an official written order issued for the supply of goods or works or the rendering of a service.
- 1.20. “Project site,” where applicable, means the place indicated in bidding documents.
- 1.21. “Purchaser” means the organization purchasing the goods.
- 1.22. “Republic” means the Republic of South Africa.
- 1.23. “SCC” means the Special Conditions of Contract.
- 1.24. “Services” means those functional services ancillaries to the supply of the goods, such as transportation and any other incidental services, such as installation, commissioning, provision of technical assistance, training, catering, gardening, security, maintenance and other such obligations of the supplier covered under the contract.
- 1.25. “Written” or “in writing” means handwritten in ink or any form of electronic or mechanical writing.
2. APPLICATION
 - 2.1. These general conditions are applicable to all bids, contracts and orders including bids for functional and professional services, sales, hiring, letting and the granting or acquiring of rights, but excluding immovable property, unless otherwise indicated in the bidding documents.
 - 2.2. Where applicable, special conditions of contract are also laid down to cover specific supplies, services or works.
 - 2.3. Where such special conditions of contract are in conflict with these general conditions, the special conditions shall apply.
3. GENERAL
 - 3.1. Unless otherwise indicated in the bidding documents, the purchaser shall not be liable for any expense incurred in the preparation and submission of a bid. Where applicable a non-refundable fee for documents may be charged.
 - 3.2. With certain exceptions, invitations to bid are only published in the Government Tender Bulletin. The Government Tender Bulletin may be obtained directly from the Government Printer, Private Bag X85, Pretoria 0001, or accessed electronically from www.treasury.gov.za
4. STANDARDS
 - 4.1. The goods supplied shall conform to the standards mentioned in the bidding documents and specifications.
5. USE OF CONTRACT DOCUMENTS AND INFORMATION; INSPECTION.
 - 5.1. The supplier shall not, without the purchaser’s prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the supplier in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.
 - 5.2. The supplier shall not, without the purchaser’s prior written consent, make use of any document or information mentioned in GCC clause except for the purpose of performing the contract.
 - 5.3. Any document, other than the contract itself mentioned in GCC clause, shall remain the property of the purchaser and shall be returned (all copies) to the purchaser on completion of

the supplier's performance under the contract if so required by the purchaser.

- 5.4. The supplier shall permit the purchaser to inspect the supplier's records relating to the performance of the supplier and to have them audited by auditors appointed by the purchaser, if so, required by the purchaser.

6. PATENT RIGHTS

- 6.1. The supplier shall indemnify the purchaser against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the goods or any part thereof by the purchaser.

7. PERFORMANCE SECURITY

- 7.1. Within thirty (30) days of receipt of the notification of contract award, the successful bidder shall furnish to the purchaser the performance security of the amount specified in SCC.
- 7.2. The proceeds of the performance security shall be payable to the purchaser as compensation for any loss resulting from the supplier's failure to complete his obligations under the contract.
- 7.3. The performance security shall be denominated in the currency of the contract or in a freely convertible currency acceptable to the purchaser and shall be in one of the following forms:
- 7.4. A bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the purchaser's country or abroad, acceptable to the purchaser, in the form provided in the bidding documents or another form acceptable to the purchaser; or
- 7.5. A cashier's or certified cheque
- 7.6. The performance security will be discharged by the purchaser and returned to the supplier not later than thirty (30) days following the date of completion of the supplier's performance obligations

8. INSPECTIONS, TESTS AND ANALYSES

- 8.1. All pre-bidding testing will be for the account of the bidder.
- 8.2. If it is a bid condition that supplies to be produced or services to be rendered should at any stage during production or execution or on completion be subject to inspection, the premises of the bidder or contractor shall be open, at all reasonable hours, for inspection by a representative of the Department or an organization acting on behalf of the Department.
- 8.3. If there are no inspection requirements indicated in the bidding documents and no mention is made in the contract, but during the contract period it is decided that inspections shall be carried out, the purchaser shall itself make the necessary arrangements, including payment arrangements with the testing authority concerned.
- 8.4. If the inspections, tests and analyses referred to in clauses 8.2 and 8.3 show the supplies to be in accordance with the contract requirements, the cost of the inspections, tests and analyses shall be defrayed by the purchaser.
- 8.5. Where the supplies or services referred to in clauses 8.2 and 8.3 do not comply with the contract requirements, irrespective of whether such supplies or services are accepted or not, the cost in connection with these inspections, tests or analyses shall be defrayed by the supplier.
- 8.6. Supplies and services which are referred to in clauses 8.2 and 8.3 and which do not comply with the contract requirements may be rejected.
- 8.7. Any contract supplies may on or after delivery be inspected, tested or analyzed and may be rejected if found not to comply with the requirements of the contract. Such rejected supplies shall be held at the cost and risk of the supplier who shall, when called upon, remove them immediately at his own cost and forthwith substitute them with supplies which do comply with the requirements of the contract. Failing such removal, the rejected supplies shall be returned at the suppliers cost and risk. Should the supplier fail to provide the substitute supplies forthwith, the purchaser may, without giving the supplier further opportunity to substitute the rejected supplies, purchase such supplies as may be necessary at the expense of the supplier.

8.8. The provisions of clauses 8.4 to 8.7 shall not prejudice the right of the purchaser to cancel the contract on account of a breach of the conditions thereof, or to act in terms of Clause 23 of GCC.

9. PACKING

9.1. The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing, case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2. The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the purchaser.

10. DELIVERY AND DOCUMENTS

10.1. Delivery of the goods shall be made by the supplier in accordance with the terms specified in the contract. The details of shipping and/or other documents to be furnished by the supplier are specified in SCC.

10.2. Documents to be submitted by the supplier are specified in SCC.

11. INSURANCE

11.1. The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the SCC.

12. TRANSPORTATION

12.1. Should a price other than an all-inclusive delivered price be required, this shall be specified in the SCC.

13. INCIDENTAL SERVICES

13.1. The supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- a) Performance or supervision of on-site assembly and/or commissioning of the supplied goods.
- b) Furnishing of tools required for assembly and/or maintenance of the supplied goods.
- c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied goods.
- d) Performance or supervision or maintenance and/or repair of the supplied goods, for a period of time agreed by the parties, provided that this service shall not relieve the supplier of any warranty obligations under this contract; and
- e) Training of the purchaser's personnel, at the supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied goods.

5. Prices charged by the supplier for incidental services, if not included in the contract price for the goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the supplier for similar services.

14. SPARE PARTS

14.1. As specified in SCC, the supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the supplier:

14.2. such spare parts as the purchaser may elect to purchase from the supplier, provided that this election shall not relieve the supplier of any warranty obligations under the contract; and

14.3. In the event of termination of production of the spare parts:

- (i) Advance notification to the purchaser of the pending termination, in sufficient time to permit the purchaser to procure needed requirements; and
- (ii) Following such termination, furnishing at no cost to the purchaser, the blueprints, drawings, and specifications of the spare parts, if requested.

15. WARRANTY

- 15.1. The supplier warrants that the goods supplied under the contract are new, unused, of the most recent or current models and those they incorporate all recent improvements in design and materials unless provided otherwise in the contract. The supplier further warrants that all goods supplied under this contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the purchaser's specifications) or from any act or omission of the supplier, that may develop under normal use of the supplied goods in the conditions prevailing in the country of final destination.
- 15.2. This warranty shall remain valid for twelve (12) months after the goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the contract, or for eighteen (18) months after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.
- 15.3. The purchaser shall promptly notify the supplier in writing of any claims arising under this warranty.
- 15.4. Upon receipt of such notice, the supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, without costs to the purchaser.
- 15.4. If the supplier, having been notified, fails to remedy the defect(s) within the period specified in SCC, the purchaser may proceed to take such remedial action as may be necessary, at the supplier's risk and expense and without prejudice to any other rights which the purchaser may have against the supplier under the contract.

16. PAYMENT

- 16.1. The method and conditions of payment to be made to the supplier under this contract shall be specified in SCC.
- 16.2. The supplier shall furnish the purchaser with an invoice accompanied by a copy of the delivery note and upon fulfilment of other obligations stipulated in the contract.
- 16.3. Payments shall be made promptly by the purchaser, but in no case later than thirty (30) days after submission of an invoice or claim by the supplier.
- 16.4. Payment will be made in Rand unless otherwise stipulated in SCC.

17. PRICES

- 17.1. Prices charged by the supplier for goods delivered and services performed under the contract shall not vary from the prices quoted by the supplier in his bid, with the exception of any price adjustments authorized in SCC or in the purchaser's request for bid validity extension, as the case may be.

18. CONTRACT AMENDMENTS

- 18.1. No variation in or modification of the terms of the contract shall be made except by written amendment signed by the parties concerned.

19. ASSIGNMENT

- 19.1. The supplier shall not assign, in whole or in part, its obligations to perform under the contract, except with the purchaser's prior written consent.

20. SUBCONTRACTS

- 20.1. The supplier shall notify the purchaser in writing of all subcontracts awarded under these

contracts if not already specified in the bid. Such notification, in the original bid or later, shall not relieve the supplier from any liability or obligation under the contract.

21. DELAYS IN THE SUPPLIER'S PERFORMANCE

- 21.1. Delivery of the goods and performance of services shall be made by the supplier in accordance with the time schedule prescribed by the purchaser in the contract.
- 21.2. If at any time during performance of the contract, the supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the goods and performance of services, the supplier shall promptly notify the purchaser in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, the purchaser shall evaluate the situation and may at his discretion extend the supplier's time for performance, with or without the imposition of penalties, in which case the extension shall be ratified by the parties by amendment of contract.
- 21.3. No provision in a contract shall be deemed to prohibit the obtaining of supplies or services from a national department, provincial department, or a local authority.
- 21.4. The right is reserved to procure outside of the contract small quantities or to have minor essential services executed if an emergency arises, the supplier's point of supply is not situated at or near the place where the supplies are required, or the supplier's services are not readily available.
- 21.5. Except as provided under GCC Clause 25, a delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of penalties, pursuant to GCC Clause 22, unless an extension of time is agreed upon pursuant to GCC Clause 21.2 Without the application of penalties.
- 21.6. Upon any delay beyond the delivery period in the case of a supplies contract, the purchaser shall, without cancelling the contract, be entitled to purchase supplies of a similar quality and up to the same quantity in substitution of the goods not supplied in conformity with the contract and to return any goods delivered later at the supplier's expense and risk, or to cancel the contract and buy such goods as may be required to complete the contract and without prejudice to his other rights, be entitled to claim damages from the supplier.

22. PENALTIES

- 22.1. Subject to GCC Clause 25, if the supplier fails to deliver any or all of the goods or to perform the services within the period(s) specified in the contract, the purchaser shall, without prejudice to its other remedies under the contract, deduct from the contract price, as a penalty, a sum calculated on the delivered price of the delayed goods or unperformed services using the current prime interest rate calculated for each day of the delay until actual delivery or performance. The purchaser may also consider termination of the contract pursuant to GCC Clause 23.

23. TERMINATION FOR DEFAULT

- 23.1. The purchaser, without prejudice to any other remedy for breach of contract, by written notice of default sent to the supplier, may terminate this contract in whole or in part:
 - a) If the supplier fails to deliver any or all of the goods within the period(s) specified in the contract, or within any extension thereof granted by the purchaser pursuant to GCC Clause 21.2.
 - b) If the Supplier fails to perform any other obligation(s) under the contract; or
 - c) If the supplier, in the judgment of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
- 23.2. In the event the purchaser terminates the contract in whole or in part, the purchaser may procure, upon such terms and in such manner as it deems appropriate, goods, works or services similar to those undelivered, and the supplier shall be liable to the purchaser for any excess costs for such similar goods, works or services. However, the supplier shall continue

performance of the contract to the extent not terminated.

- 23.3. Where the purchaser terminates the contract in whole or in part, the purchaser may decide to impose a restriction penalty on the supplier by prohibiting such supplier from doing business with the public sector for a period not exceeding 10 years.
- 23.4. If a purchaser intends imposing a restriction on a supplier or any person associated with the supplier, the supplier will be allowed a time period of not more than fourteen (14) days to provide reasons why the envisaged restriction should not be imposed. Should the supplier fail to respond within the stipulated fourteen (14) days the purchaser may regard the intended penalty as not objected against and may impose it on the supplier?
- 23.5. Any restriction imposed on any person by the Accounting Officer /Authority will, at the discretion of the Accounting Officer / Authority, also be applicable to any other enterprise or any partner, manager, director or other person who wholly or partly exercises or exercised or may exercise control over the enterprise of the first-mentioned person, and with which enterprise or person the first-mentioned person, is or was in the opinion of the Accounting Officer / Authority actively associated.
- 23.6. If a restriction is imposed, the purchaser must, within five (5) working days of such imposition, furnish the National Treasury, with the following information: (i) The name and address of the supplier and / or person restricted by the purchaser; (ii) The date of commencement of the restriction (iii) The period of restriction; and (iv) The reasons for the restriction. These details will be loaded in the National Treasury's central database of suppliers or persons prohibited from doing business with the public sector.
- 23.7. If a court of law convicts a person of an offence as contemplated in sections 12 or 13 of the Prevention and Combating of Corrupt Activities Act, No. 12 of 2004, the court may also rule that such person's name be endorsed on the Register for Tender Defaulters. When a person's name has been endorsed on the Register, the person will be prohibited from doing business with the public sector for a period not less than five years and not more than 10 years. The National Treasury is empowered to determine the period of restriction and each case will be dealt with on its own merits. According to section 32 of the Act the Register must be open to the public. The Register can be perused on the National Treasury website.
- 24. ANTI-DUMPING AND COUNTERVAILING DUTIES AND RIGHTS**
- 24.1. When, after the date of bid, provisional payments are required, or antidumping or countervailing duties are imposed, or the amount of a provisional payment or anti-dumping or countervailing right is increased in respect of any dumped or subsidized import, the State is not liable for any amount so required or imposed, or for the amount of any such increase. When, after the said date, such a provisional payment is no longer required or any such anti-dumping or countervailing right is abolished, or where the amount of such provisional payment or any such right is reduced, any such favourable difference shall on demand be paid forthwith by the contractor to the State or the State may deduct such amounts from moneys (if any) which may otherwise be due to the contractor in regard to supplies or services which he delivered or rendered, or is to deliver or render in terms of the contract or any other contract or any other amount which may be due to him
- 25. FORCE MAJEURE**
- 25.1. Notwithstanding the provisions of GCC Clauses 22 and 23, the supplier shall not be liable for forfeiture of its performance security, damages, or termination for default if and to the extent that his delay in performance or other failure to perform his obligations under the contract is the result of an event of force majeure.
- 25.2. If a force majeure situation arises, the supplier shall promptly notify the purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the purchaser in writing,

the supplier shall continue to perform its obligations under the contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.

26. TERMINATION FOR INSOLVENCY

26.1. The purchaser may at any time terminate the contract by giving written notice to the supplier if the supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the purchaser.

27. SETTLEMENT OF DISPUTES

27.1. If any dispute or difference of any kind whatsoever arises between the purchaser and the supplier in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

27.2. If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the purchaser or the supplier may give notice to the other party of his intention to commence with mediation. No mediation in respect of this matter may be commenced unless such notice is given to the other party.

27.3. Should it not be possible to settle a dispute by means of mediation, it may be settled in a South African court of law.

27.4. Mediation proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

27.5. Notwithstanding any reference to mediation and/or court proceedings herein, (a) the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and (b) The purchaser shall pay the supplier any monies due the supplier.

28. LIMITATION OF LIABILITY

28.1. Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6;

i) the supplier shall not be liable to the purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs provided that this exclusion shall not apply to any obligation of the supplier to pay penalties and/or damages to the purchaser; and

ii) The aggregate liability of the supplier to the purchaser, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

29. GOVERNING LANGUAGE

29.1. The contract shall be written in English. All correspondence and other documents pertaining to the contract that is exchanged by the parties shall also be written in English.

30. APPLICABLE LAW

30.1. The contract shall be interpreted in accordance with South African laws, unless otherwise specified in SCC.

31. NOTICES

31.1. Every written acceptance of a bid shall be posted to the supplier concerned by registered or certified mail and any other notice to him shall be posted by ordinary mail to the address furnished in his bid or to the address notified later by him in writing and such posting shall be deemed to be proper service of such notice 31.2 The time mentioned in the contract documents for performing any act after such aforesaid notice has been given, shall be reckoned from the date of posting of such notice.

32. TAXES AND DUTIES

- 32.1. A foreign supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the purchaser's country.
- 32.2. A local supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted goods to the purchaser.
- 32.3. No contract shall be concluded with any bidder whose tax matters are not in order. Prior to the award of a bid the Department must be in possession of a tax clearance certificate, submitted by the bidder. This certificate must be an original issued by the South African Revenue Services.

33. NATIONAL INDUSTRIAL PARTICIPATION (NIP) PROGRAMME

- 33.1.** The NIP Programme administered by the Department of Trade and Industry shall be applicable to all contracts that are subject to the NIP obligation.

6. PROHIBITION OF RESTRICTIVE PRACTICES

- 33.2. In terms of section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, an agreement between, or concerted practice by, firms, or a decision by an association of firms, is prohibited if it is between parties in a horizontal relationship and if a bidder (s) is / are or a contractor(s) was / were involved in collusive bidding (or bid rigging).
- 33.3.** If a bidder(s) or contractor(s), based on reasonable grounds or evidence obtained by the purchaser, has / have engaged in the restrictive practice referred to above, the purchaser may refer the matter to the Competition Commission for investigation and possible imposition of administrative penalties as contemplated in the Competition Act No. 89 of 1998

PART E: GENERAL PROCEDURES

GENERAL DIRECTIVES

1. The following general procedures contained in this document have been laid down by the Council and are applicable to all bids, orders, and contracts, unless otherwise approved by the Council prior to the invitation of the bids.
2. Where applicable, special conditions or procedures are also laid down by the Council to cover specific supplies or services.
3. Where such special conditions or procedures are in conflict with the general conditions and procedures, the special conditions or procedures shall apply.
4. The bidder shall satisfy himself/herself with the conditions and circumstances of the bid. By bidding, the bidder shall deem to have satisfied himself/herself as to all the conditions and circumstances of the bid.
5. Formal contract are concluded with the contractors only where this requirement is stated in the bid invitation.
6. All bids with regard to the bidding of a service e.g., materials, cleaning services; professional services, etc. shall be subject to the negotiation of a Service Level agreement between the successful contractor and the Municipality. The acceptance of this Service Level Agreement is subject to the approval by the Council of the Municipality.
7. The written acceptance of bid shall be posted to the bidder or contractor concerned by registered or certified mail.
8. Process for competitive bidding Following are procedures for a competitive bidding process for each of the following stages:
9. Compilation of bidding documentation
 - Take into account – The general conditions of contract; Any Treasury guidelines on bid documentation; and The requirement of the Construction Industry Development Board, in the case of a bid relating to construction, Replacement or refurbishment of buildings or infrastructure.
 - Include evaluation and adjudication criteria, including any criteria required by other applicable legislation.
 - Compel bidders to declare any conflict of interest they may have in the transaction for which the bid is submitted as MBD 4
 - Require the bidders to furnish the following if the value of the transaction is expected to exceed R10 million (VAT included):
- a) If the bidder is required by law to prepare annual financial statements for auditing, their audited annual financial statement – * For the past three years; or * Since their establishment if establishment during the past three years
- b) A certificate signed by the bidder certifying that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payments is overdue for more than 30 days
- c) Particulars of any contracts awarded to the bidder by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract
- d) A statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality is expected to be transferred out of the Republic
 - Stipulate that disputes must be settled by means of mutual consultation, mediation (with or without legal representation), or, when unsuccessful, in a South African

court of law.

10. Issuing of bid documents

On the date that the advertisement appears in the Municipality's Bid Bulletin, and or media, prospective bidders may request copies of the bid documentation. The Supply Chain Unit will keep a register and potential bidders should sign for receipt of the bid documentation. If a fee is payable, an official receipt must be issued before the bid document is handed to the bidder. No bid responses from any Bidder should be accepted if sent via the Internet, e-mail or fax.

Only the Supply Chain Management Unit will have direct communication between the potential bidders and will facilitate all communication between potential bidders and the Municipality with regard to any advertised bid. No line function staff should be allowed to communicate with potential bidders without the approval by the Chief Financial Officer: Supply Chain Management Unit. The Supply Chain Management Unit will only consider request for the extension of the closing dates of advertised bid if the postponed date can be advertised in the media used to advertise before the original closing date. The closing time may be postponed only if all potential bidders can be advised of the postponed time, in writing, before the original closing time. The decision to extend the closing date or time rests with the Chief Financial Officer: Supply Chain Management Unit, who must ensure compliance with all relevant rules and regulations and must confirm prior to the action being taken.

11. Payment of bid documents

To ensure that only bona fide bidders collect documentation, and to recover printing costs, bid documents will be issued only after payment of the following amounts to the cashier:

Category Contract	Contract Value	Bid Payment
Micro	R30 000 – R200 000	R200.00
Small	R200 001 – R1000 000	R700.00
Medium	R1000 001 – R2 Million	R1500.00
Large	Above	R2000.00
Professional Services		R5000.00

12. Public Invitation for Competitive bids

The following are procedures for the invitation of competitive bids:

- i) Invitation to prospective providers to submit bids must be by means of a public advertisement in newspapers commonly circulating locally, the website of the municipality or any other appropriate ways (which may include an advertisement in the Government Bid Bulletin) and
- ii) Public advertisement must contain the following: The closure date for the submission of bids, which may not be less than 30 days in the case of transactions over R10 million (Vat included), or which are of a long term nature, or 14 days in any other case, from the date

on which the advertisement is placed in a newspaper; subject to (iii) below; and (iv) Accounting officer may determine a closure date for the submission of bids which is less than the 30 or 14 days' requirement, but only if such shorter period can be justified on the grounds of urgency or emergency or any exceptional case where it is impractical or impossible to follow the official procurement process

iii) Bids submitted must be sealed.

iv) The following information must appear in any advertisement:

- e) Bid number,
- f) Description of the requirements
- g) Closing date and time.
- h) The name and telephone numbers of the contact person for any enquiries.
- 7. Inspection on loco: A fully explanatory site inspection will be conducted.
- 8. Handling of bids submitted in response to public invitation

- Closing of bids

All bids will close at **12H00** on a date as stipulated on the advertisement, which must be reflected in the bid document. Bids are late if they are received at the address indicated in the bid documents after the closing date and time. A late bid should not be admitted for consideration and where practical should be returned unopened to the bidder accompanied by and explanation.

- Opening of bids

Bids are opened in public as soon as possible after the closure in the presence of the Senior Supply Chain Officer: Supply Chain Management or his/her delegate. The official opening the bids should in each case read out the name of the bidder and the amount of the bid. The bid should be stamped with the official stamp of the Municipality and endorsed with the signatures of the person opening it and of the person in whose presence it was opened. Bids should be recorded in a register kept for that purpose.

13. Validity of the bids

The validity periods should not exceed 90 (ninety) days and is calculated from the date of bid closure endorsed on the front cover of the bid document. Should the validity period expire on a Saturday, Sunday or Public holiday, the bid must remain valid and open for acceptance until the closure on the following working date.

14. Consideration of bids

The Council takes all bids duly admitted into consideration. The Council reserves the right to accept the lowest or any bid received. The decision by the Municipality regarding the awarding of a contract must be final and binding

15. Evaluation of bids

The following are criteria against which all bids' responses will be evaluated:

- a) Compliance with bid conditions
 - Bid submitted on time

- Bid forms signed and each page initialled
- All essential information provided
- Certified ID copies
- Proof of work experience (attach CV)
- Submission of an original Tax Clearance Certificate,

MBD 2

- i) Submission of Company Registration Certificate
 - ii) Submission of a Joint Venture Agreement, properly signed by all parties
 - iii) Payment of Municipal Rates
 - iv) And all requirements as per advert
- b) Meeting technical specifications and comply with bid conditions.
- c) The number of points scored for achieving Government's Broad-Based Black Economic Empowerment objectives, points scored for price and / or points scored for functionality if applicable.

16. Evaluation of bids on functionality and price

- i) Greater Tzaneen Municipality must in the bid documents indicate if, in respect of a particular bid invitation that bids will be evaluated on functionality and price.
- ii) The total combined points allowed for functionality and price may, in respect of bids with an estimated Rand value above R1,000,000.00, not exceed 90 points.
- iii) When evaluating bids contemplated in this item, the points for functionality must be calculated for each individual bidder
- iv) The conditions of bid may stipulate that a bidder must score a specified minimum number of points for functionality to qualify for further adjudication.
- v) The points for price, in respect of a bid which has scored the specified minimum number of points contemplated in sub-regulation (iv) above, must, subject to the application of the evaluation system for functionality and price contemplated in this regulation, be established separately and be calculated in accordance with the provisions of regulations c and d.
- vi) The number of points scored for achieving Government's Broad-Based Black Economic
- vii) Empowerment Objectives must be calculated separately and must be added to the points
- viii) Scored for functionality and price.
- ix) Only bid with the highest number of points be selected.

17. Acceptance of bids

Successful bidders must be notified at least by registered post of the acceptance of their bids, but that acceptance, however, will only take effect after completion of the prescribed contract form. Unsuccessful bids should not be returned to bidders but should be placed on record for audit purposes. A register or records should be kept of all bids accepted

18. Publication of bid information

The particulars of the successful bidders should be published in the Municipality's Bid Bulletin as well as the website

19. Cancellation and re-invitation of bids

- In the event that in the application of the 80/20 preference point system as stipulated in the bid documents, all bids received exceed the estimated Rand Value of R50 million, the bid invitation must be cancelled.
- In the event that, in the application of the 90/10 preference point system as stipulated in the bid documents, all bids received are equal to or below R50 million, the bid must be cancelled.
- In the event that the Municipality has cancelled a bid invitation as contemplated in sub regulations (i) and (ii) must re-invite bids and, must, in the bid documents stipulate the correct preference point 30 system to be applied. A bid may be cancelled before award if:
 - a. Due to changed circumstances, there is no longer a need for the goods, works or services offered, or
 - b. Funds are no longer available to cover the total envisaged expenditure, or
 - c. No acceptable bids were received

PART F: BID SPECIFICATION

TENDER DATA

The Tender Data shall be read with the Standard Conditions of Tender in order to expand on the Tenderer's obligations and the Employer's undertakings in administering the tender process in respect of the project under consideration.

The Tender Data hereafter shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of Tender Data given below is cross-referenced to the relevant clause in the 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, as printed in Board Notice 86 of 2010 in the Government Gazette No. 33239 of 2010 dated 28 May 2010.

The Standard Conditions of Tender make several references to the Tender Data which specifically applies to this tender.

Tender Data Applicable to this Tender

Clause Number	Data / Wording
F.1.2	PART 1: PRICING DATA
	1.1 Pricing Instructions
	1.2 Schedule of Quantities
	PART 2: SCOPE OF WORKS
	2.1 Standard Specifications
	2.2 Project Specifications
	2.3 Particular Specifications
	PART 3: SITE INFORMATION
	3.1 Locality Plan
	3.2 Example of Contract Signboard Details
	a) Drawings
	b) 'General Conditions of Contract for Construction Works, Third Edition, 2015' issued by the South African Institution of Civil Engineering (abbreviated title

Clause Number	Data / Wording
	<p>‘General Conditions of Contract 2015’ – ‘GCC 2015’). This document is obtainable separately and Tenderers shall obtain their own copy.</p> <p>c) ‘The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations 2014 (Government Gazette No 37305 of 7 February 2014, Notice No R. 84)’. These documents are obtainable separately and Tenderers shall obtain their own copies.</p> <p>d) The Construction Industry Development Board Act No. 38 of 2000 as amended and the Regulations in terms of the CIDB Act 38 of 2000, Government Notice No 692 of 9 June 2004 as amended. These documents are obtainable separately and Tenderers shall obtain their own copies.</p> <p>In addition, Tenderers are advised, in their own interest, to obtain their own copies of the relevant Acts, Regulations and Standards referred to in this document as they are essential for the Tenderer to become acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and participation of targeted enterprises and labour.</p>
F.1.4	<p>The employer’s agent is:</p> <p>Name of the Firm: GLS Consulting Contact Person: Tsolane Mokoena Tel: 021 880 0388 Fax: N/A E-mail: Tsolane@gl.s.co.za</p>
F.2.1	<p>A Tenderer will not be eligible to submit a tender if:</p> <p>a) the Contractor submitting the tender is under restrictions or has principals who are under restriction to participate in the Employer’s procurement due to corrupt or fraudulent practices.</p> <p>b) the Tenderer does not have the legal capacity to enter into the contract.</p> <p>c) the Contractor submitting the tender is insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of the foregoing.</p> <p>d) The Tenderer does not comply with the legal requirements stated in the Employer’s procurement policy.</p>

Clause Number	Data / Wording
	<p>e) The Tenderer cannot demonstrate that he possesses the necessary professional and technical qualifications and competence, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract.</p> <p>f) 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.</p> <p>g) The Established Contractor shall be registered in CIDB contractor grading designation 6EP or higher.</p>
F.2.7	<p>The arrangements and venue for the compulsory Clarification Meeting are:</p> <p>Venue: Greater Tzaneen Municipality, Tzaneen, 0850</p> <p>Contact Person:</p> <p>Tel: 015 307 8199</p> <p>Fax: N/A</p> <p>Email: Zabel.modjadji@tzaneen.gov.za</p>
F.2.8	<p>Change ‘five working days’ to ‘seven working days’. Working days shall be from Monday to Friday and shall exclude all gazetted public holidays.</p>
F.2.10	<p>All Tenderers must be registered for Value Added Tax (VAT) with the South African Revenue Services (SARS).</p>
F.2.13	<p>F.2.13.3 Tender offers shall be submitted as an original only. Under no circumstances whatsoever may the tender forms be retyped or redrafted. Photocopies of the original tender documentation may be used, but an original signature must appear on such photocopies.</p> <p>F.2.13.5 The Employer’s address for delivery of tender offers and identification details to be shown on each tender offer package are:</p> <p>Location of Tender Box: Greater Tzaneen Municipality</p> <p>Physical Address: Council Chambers, 38 Agatha Street, Civic Centre Building, Tzaneen, 0850</p> <p>Identification Details: Tender No. SCMU 22/2025</p>
F.2.15	<p>The closing time for submission of Tender Offers: 14 July 2025</p>

Clause Number	Data / Wording
	Telegraphic, telephonic, telex, facsimile, electronic, e-mailed and late tenders will not be accepted.
F.2.16	The tender offer validity period is ninety (90) days from the closing time for submission of tenders.
F.2.19	Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.
F.2.22	This is not applicable.
F.3.1	Change ‘five working days’ to ‘seven working days’. Working days shall be from Monday to Friday and shall exclude all gazetted public holidays.
F.3.2	Change ‘three days’ to ‘three working days’. Working days shall be from Monday to Friday and shall exclude all gazetted public holidays.
F.3.3	The time and location for opening of the tender offers are: Time: 12h00 Location / Venue: Revenue Unit at the Finance Department of Greater Tzaneen Municipality, 38 Agatha Street, Civic Centre Building, Tzaneen, 0850
F.3.4	A two-envelope system will <u>not be followed</u> .
F.3.6 F.3.6.1 F.3.6.2	<p style="text-align: center;">Evaluation of tender offers</p> <p style="text-align: center;">GENERAL CONDITIONS</p> <p>1.1 The following preference point systems are applicable to invitations to tender:</p> <ul style="list-style-type: none"> • the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and • the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included). <p>To be completed by the organ of state</p> <p>(a) The applicable preference point system for this tender is the 80/20 preference point system.</p> <p>○ Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:</p> <ol style="list-style-type: none"> 4. Price; and 5. Specific Goals.

Clause Number	Data / Wording								
	<p>○ To be completed by the organ of state:</p> <p>The maximum points for this tender are allocated as follows:</p> <table> <tr> <th></th><th>POINTS</th></tr> <tr> <td>PRICE</td><td>80</td></tr> <tr> <td>SPECIFIC GOALS</td><td>20</td></tr> <tr> <td>Total points for Price and SPECIFIC GOALS</td><td>100</td></tr> </table> <p>○ Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.</p> <p>○ The organ of state 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 to preferences, in any manner required by the organ of state.</p> <p>(a) DEFINITIONS</p> <p>3. “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;</p> <p>4. “price” means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;</p> <p>5. “rand value” means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;</p> <p>6. “tender for income-generating contracts” means a written offer in the form determined by an organ of state 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 organ of state and a third party that produces revenue for the organ of state, 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; and</p> <p>7. “the Act” means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).</p> <p>1. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES</p> <p>1.1. POINTS AWARDED FOR PRICE</p> <p>3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS</p> <p>A maximum of 80 or 90 points is allocated for price on the following basis:</p> $Ps = 80 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right) \quad \text{or} \quad Ps = 90 \left(1 - \frac{Pt - P_{min}}{P_{min}} \right)$ <p style="text-align: center;">Where</p> <p>Ps = Points scored for price of tender under consideration</p> <p>Pt = Price of tender under consideration</p>		POINTS	PRICE	80	SPECIFIC GOALS	20	Total points for Price and SPECIFIC GOALS	100
	POINTS								
PRICE	80								
SPECIFIC GOALS	20								
Total points for Price and SPECIFIC GOALS	100								

Clause Number	Data / Wording
	<p>P_{min} = Price of lowest acceptable tender</p> <p>1.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT</p> <p>1.2.1. POINTS AWARDED FOR PRICE</p> <p>A maximum of 80 or 90 points is allocated for price on the following basis:</p> <p style="text-align: center;">80/20 or 90/10</p> $P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right) \quad \text{or} \quad P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$ <p style="text-align: center;">Where</p> <p>P_s = Points scored for price of tender under consideration P_t = Price of tender under consideration P_{max} = Price of highest acceptable tender</p> <p>1. POINTS AWARDED FOR SPECIFIC GOALS</p> <p>1.1 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 goals stated in table 1 below as may be supported by proof/documentation stated in the conditions of this tender:</p> <p>1.2 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—</p> <p style="padding-left: 40px;">i) 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</p> <p style="padding-left: 40px;">ii) 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,</p> <p style="padding-left: 40px;">then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.</p> <p>Table 1: Specific goals for the tender and points claimed are indicated per the table below.</p> <p><i>(Note to organs of state: Where either the 90/10 or 80/20 preference point system is</i></p>

Clause Number	Data / Wording				
	<i>applicable, corresponding points must also be indicated as such.</i>				
	<i>Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)</i>				
	The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)	Means of verification (MOV) for specific goals	
	Black People	20		CK, CSD report and Certified Identification documentation	Tick
	TOTAL	20			
F.3.11.9	<p>All proposals will be evaluated in terms of functionality with maximum of 100 functionality points. All proposals meeting minimum scores of 70 points will be considered for the next final evaluation stage whereby proposals will be evaluated in terms of Price and Preference.</p> <p>The score for functionality will be calculated using the following formula:</p> $W_Q = W_2 \times \frac{S_o}{M_s}$ <p>Where:</p> <p>W₂ = is the percentage score given for quality and equals 100</p> <p>S_o = is the maximum possible score for quality allocated to the submission under consideration</p> <p>M_s = is the maximum possible score for quality in respect to the submission</p> <p>The quality will comprise scores for the following based on criteria indicated in the respective tender returnable schedules:</p>				

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 and are attached hereto.

ADDENDUM No.	DATE

Please attach all Addenda to this page

SIGNATURE:

DATE:

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

COMPULSORY ENTERPRISE QUESTIONNAIRE

PART 1: PARTICULARS AND RECORD OF SERVICE OF THE STATE

The following particulars must be furnished:

Section 1: Name of enterprise:					
Section 2: VAT registration number:					
Section 3: CIDB registration number:					
Section 4: Particulars of sole proprietors and partners in partnerships					
Name*	Identity number*	Personal income tax number*			
<p><i>* Complete only if sole proprietor or partnership, and attach separate page if more than three partners</i></p>					
Section 5: Particulars of companies and close corporations					
Company registration number:					
Close corporation number:					
Tax reference number:					
Section 6: Record of service of the state					
<p>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 serving or has served within the last 12 months as any of the following:</p> <table style="width: 100%;"> <tr> <td style="width: 50%;"> i) a member of any municipal council ii) a member of any provincial legislature iii) a member of the National Assembly or the National Council of Province <input type="checkbox"/> a member of the board of directors of any municipal entity <input type="checkbox"/> an official of any municipality or municipal entity </td> <td style="width: 50%;"> iv) 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) v) a member of an accounting authority of any national or provincial public entity vi) an employee of Parliament or a provincial legislature </td> </tr> </table>				i) a member of any municipal council ii) a member of any provincial legislature iii) a member of the National Assembly or the National Council of Province <input type="checkbox"/> a member of the board of directors of any municipal entity <input type="checkbox"/> an official of any municipality or municipal entity	iv) 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) v) a member of an accounting authority of any national or provincial public entity vi) an employee of Parliament or a provincial legislature
i) a member of any municipal council ii) a member of any provincial legislature iii) a member of the National Assembly or the National Council of Province <input type="checkbox"/> a member of the board of directors of any municipal entity <input type="checkbox"/> an official of any municipality or municipal entity	iv) 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) v) a member of an accounting authority of any national or provincial public entity vi) an employee of Parliament or a provincial legislature				
If any of the above boxes are marked, disclose the following:					
Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder**	Name of institution, public office, board or organ of state served, and position held**	Status of service (tick appropriate column) **			
		Current	Within last 12 months		

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**** Attach additional pages if more space is required**

Section 7: Record of spouses, children and parents in the service of the state

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

vii) a member of any municipal council viii) a member of any provincial legislature ix) a member of the National Assembly or the National Council of Province <input type="checkbox"/> a member of the board of directors of any municipal entity <input type="checkbox"/> an official of any municipality or municipal entity	x) 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) xi) a member of an accounting authority of any national or provincial public entity xii) an employee of Parliament or a provincial legislature
--	--

If any of the above boxes are marked, disclose the following:

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

***** Attach additional pages if more space is required**

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

- (a) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- (b) confirms that neither the name of the enterprise nor 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;
- (c) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise, has within the last five years been convicted of fraud or corruption;
- (d) confirms that I am not / we are not associated, linked or involved with any other tendering entities submitting tender offers and that I / we 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;
- (e) confirms that the information provided above in Sections 1 to 7 of Form C: Part 1 is within my personal knowledge and is to the best of my belief both true and correct.

Signed: Date:

Name: Position:

Enterprise name:

PLANT AND EQUIPMENT

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

a) Details of major plant and equipment owned by me / us and immediately available for this contract:

DESCRIPTION (<i>type, size, capacity, etc.</i>)	QUANTITY	YEAR OF MANUFACTURE

Attach additional pages if more space is required

b) Details of major plant and equipment that will be hired or acquired for this contract if my / our tender is accepted:

DESCRIPTION (<i>type, size, capacity, etc.</i>)	QUANTITY	HOW ACQUIRED	
		HIRE/ BUY	SOURCE

Attach additional pages if more space is required

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

SIGNATURE:

DATE:

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

KEY PERSONNEL

The Tenderer must insert in the spaces provided below a list of the key personnel to be employed in the construction of the Works together with a resumé of their experience with particular reference to the construction of similar Works.

The Tenderer shall attach the curriculum vitae of the listed key personnel to the next page.

DESIGNATION	NAMES	PROJECT TYPE	VALUE OF WORK	YEAR COMPLETED
Project Manager Registered with ECSA as a Pr.Eng. or Pr. Tech Electrical and SACPCMP with a minimum of three (3) years' experience managing SCADA or Industrial automation projects.				
SCADA Engineer Registered with ECSA as Pr.Eng. or Pr. Tech (Electrical or Software) with a minimum of three (3) years' experience managing SCADA or Industrial automation projects.				
SCADA Commissioning Technician Registered with ECSA as an Engineer /Technologist (Electrical or Software) with a minimum of three (3) years' experience commissioning SCADA or Industrial automation projects.				

Attach additional pages if more space is required

SIGNATURE:

DATE:

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

CURRICULUM VITAE OF KEY PERSONNEL

[Curriculum Vitae of key personnel to be attached here]

[illegible]

DEVIATIONS AND QUALIFICATIONS

Should the Tenderer wish to make any deviation from or any qualification to the Special Conditions of Contract, Specifications, Schedule of Quantities, or Drawings, or should he wish to qualify the tender in any way, he shall indicate the proposals clearly hereunder or alternatively on photocopies of the original tender documentation which shall be attached to this page.

[illegible]

Attach additional pages if more space is required

SIGNATURE:

DATE:

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

CONTRACTOR'S HEALTH AND SAFETY DECLARATION

In terms of Clause 5(1)(h) of the OHSA 1993 Construction Regulations 2014 (referred to as "the Regulations" hereafter), a Contractor may only be appointed to perform construction work if the Employer is satisfied that the 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:
 - a) From my own competent resources as detailed in 4(a) hereafter: ***Yes / No**
 - b) From my own resources still to be appointed or trained until competency is achieved, as detailed in 4(b) hereafter: ***Yes / No**
 - c) From outside sources by appointment of competent specialist subcontractors as detailed in 4(c) hereafter: ***Yes / No**

*(*delete whatever is not applicable)*

4. Details of resources I propose:

Note: *Competent resources shall include safety personnel such as the construction manager, construction health and safety officer and construction supervisor as defined in Regulation 8, and competent persons as defined in the OHSA 1993 Construction Regulations 2014, as applicable to this contract.*

- 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

NAMES OF COMPETENT PERSONS	POSITIONS TO BE FILLED BY COMPETENT PERSONS

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

(i) By whom will training be provided?

(ii) When will training be undertaken?

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

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

NAME OF PROPOSED SUBCONTRACTOR:	QUALIFICATIONS OR DETAILS OF COMPETENCY OF THE SUBCONTRACTOR:

5. I hereby undertake, if my tender is accepted, to provide, before commencement of the works under the contract, a suitable, sufficiently documented and coherent site-specific Health and Safety Plan in accordance with Regulation 7(1)(a) of the Construction Regulations, which plan shall be subject to approval by the Employer.
6. I confirm that copies of my company's approved Health and Safety Plan, the Employer's Health and 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 Contractor's personnel, the Employer's personnel, the Engineer, visitors, and officials and inspectors of the Department of Labour.
7. I hereby confirm that adequate provision has been made in my tendered rates and prices in the schedule 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 in terms of the said Regulations (Regulation 33) for failure on the Contractor's part to comply with the provisions of the Act and the Regulations.

8. I agree that my failure to complete and execute this declaration to the satisfaction of the Employer will mean that I am unable to comply with the requirements of the OHSA 1993 Construction Regulations 2014 and accept that my tender will be prejudiced and may be rejected at the discretion of the Employer.

SIGNATURE:

DATE:

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

SCHEDULE OF ALTERNATIVE TENDERS

An alternative offer or design will be considered only if the tender for the original items has been fully priced and completed.

Such alternative offers shall be described, measured and priced in sufficient detail to enable the Employer to evaluate the alternative. The Tenderer shall set out the proposal clearly hereunder or alternatively on photocopies of the original tender documentation which shall be attached to this page

SECTION	PAGE	ALTERNATIVE OFFER, INCLUDING REFERENCE CLAUSE OR ITEM NUMBER

Attach additional pages if more space is required

SIGNATURE:

DATE:

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

PART 1: PRICING DATA

PRICING INSTRUCTIONS

1. GENERAL

The Schedule 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, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Project Specifications) and the Drawings.

2. DESCRIPTION OF ITEMS IN THE SCHEDULE

The Schedule of Quantities has been drawn up generally in accordance with the relevant provisions of the Standard Specifications.

The short descriptions of the items in the Schedule of Quantities are for identification purposes only and the measurement and payment clause of the Standard Specifications and the Particular Specifications, read together with the relevant clauses of the amendments and additions contained in the Project Specifications and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

For the purposes of this Schedule of Quantities, the following words shall have the meanings hereby assigned to them:

- **Unit:** The unit of measurement for each item of work as defined in the specifications.
- **Quantity:** The number of units of work for each item.
- **Rate:** The payment per unit of measurement at which the Tenderer tenders to do the work.
- **Amount:** The product of the quantity and the rate tendered for an item.
- **Lump Sum:** An amount tendered for an item, the extent of which is described in the Schedule of Quantities, the specifications or elsewhere but the quantity of work of which is not measured in any units.

3. QUANTITIES REFLECTED IN THE SCHEDULE

The quantities given in the Schedule of Quantities are estimates only, and are subject to re-measure during the execution of the work. The quantities finally accepted and certified for payment, and not the quantities given in the Schedule of Quantities, shall be used to determine payments to the Contractor. The Contractor shall obtain the Employer's Agent's detailed instructions for all work before ordering any materials or executing work or making arrangements for it. The quantities of material or work stated in the Schedule of Quantities shall not be regarded as authorisation for the Contractor to order material or to execute work.

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

in accordance with the Drawings, and no allowance has been made for waste. The validity of the contract will in no way be affected by differences between the quantities in the Schedule of Quantities and the quantities finally certified for payment.

4. PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Schedule 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 2015. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

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

5. PRICING OF THE SCHEDULE OF QUANTITIES

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

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

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

Should the Tenderer group a number of items together and tender one lump sum for such group of items, this single lump sum shall apply to that group of items and not to each individual item.

The tendered lump sums and rates shall be valid irrespective of any change in the quantities during the execution of the contract.

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

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

For "Rate Only" items, no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall, however, note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as unbalanced.

Reasonable compensation will be received where no payment item appears in respect of work required in terms of the Contract which is not covered in any other pay item.

All rates and amounts quoted in the Schedule 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 Schedule of Quantities. Note that fractions of a cent in all rates shall be discounted.

6. CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

7. INTERIM PAYMENTS

Unless otherwise specified, progress payments in Interim Certificates, referred to in Clause 6.10 of the General Conditions of Contract 2015, in respect of "sum" items in the Schedule of Quantities shall be by means of interim progress instalments assessed by the Employer's Agent and based on the measure in which the work actually carried out relates to the extent of the work to be done by the Contractor.

Notwithstanding any custom to the contrary, the work as executed will be measured for payment in accordance with the methods described in the contract documents under the various items of payment.

Attention is directed to the provisions of Clause 1220 of the Standard Specifications regarding the measurement of quantities for payment. Except where specified otherwise than in Clause 1220, the nett measurements or mass of the finished work in place shall be taken for payment, but any quantity of work in excess of that prescribed shall be excluded.

8. UNITS OF MEASUREMENT

The units of measurement described in the Schedule of Quantities are metric units. The following abbreviations are used in the Schedule of Quantities:

mm	-	millimetre	m3-km	-	cubic metre-kilometre	Prov sum	-	provisional sum
m	-	metre	l	-	litre	kPa	-	kilopascal
km	-	kilometre	kl	-	kilolitre	MPa	-	megapascal
km-pass	-	kilometre-pass	kg	-	kilogram	MN	-	meganewton
m2	-	square metre	t	-	ton (1 000 kg)	t-km	-	ton-kilometre
m2-pass	-	square metre-pass	No	-	number	h	-	hour
ha	-	hectare	%	-	percent	dia	-	diameter
m3	-	cubic metre	PC sum	-	prime cost sum	Sum	-	lump sum
kW	-	kilowatt	MN-m	-	meganewton-metre			

9. CONSISTENCY OF RATES

In order to ensure that payments certified by the Employer's Agent are reasonably consistent with the market value of the work done, and that variations in quantities do not distort the contract valuation, the rates, prices and amounts tendered in the Schedule of Quantities are required to be in balance.

A tender will be considered out of balance if:

- (i) the combined, extended total tendered for the item:

B13.01 The contractor's general obligations:

- Fixed obligations
- Value-related obligations
- Time-related obligations

exceeds a maximum of 15% of the Tender Offer (excluding contingencies, escalation and VAT).

- (ii) the rates, prices or amounts tendered for any other items differ by more than 20 (twenty) percent from either the next highest or next lowest rates, prices or amounts tendered, or else from the latest departmental estimates.

Any such unbalanced tender may be rejected if, after fourteen (14) days of having been given written notice by the Employer to adjust those rates or lump sums which are unreasonable or out of balance, the Tenderer fails to make the necessary satisfactory adjustments. These adjustments in rectification will be such that increases are balanced by decreases, leaving the tender offer unchanged.

SCHEDULE OF QUANTITIES

See Annexure A

PART 2: SCOPE OF WORK

STANDARD SPECIFICATIONS

1 PROCUREMENT

1.1 Preferential procurement procedures

Preferential points shall be allocated and tenders awarded in accordance with T1.2 "TENDER DATA" clause F.3.11.9.

2 CONSTRUCTION

2.1 Applicable SANS 2001 standards for construction work

All construction work must conform with the relevant SABS or SANS specifications referred to in the 'Standard Specifications or in Section C3.2: Project Specifications, Part B: Amendments to the Standard Specifications, of this document.

2.2 Applicable national and international standards

All items of plant supplied and/or installed, whether expressly specified herein or not, shall conform in respect of quality, manufacture, tests and performance with the requirements of the appropriate South African National Standards (SANS) Specifications and addenda thereto, or, if no such Specification exists covering any one or more of these requirements, with the relevant requirements of the appropriate British Standard Specifications and addenda thereto, except where elsewhere required by this Specification or approved by the Employer's Agent.

2.3 Particular / generic specifications

As well as the 'Amendments to the Standard Specifications' contained in Part B of Section C3.2: Project Specifications, of this document, the following Particular Specifications as contained in Section C3.3, are applicable to this Contract:

Part C: Environmental Management Specification

Part D: OHS 1993 Health and Safety Specification

Part E: Small Contractor Development

3.2: Project Specifications, amends these references to the 2015 3rd edition of the General Conditions of Contract for Construction Works published by the South African Institution of Civil Engineering which is applicable to this Contract.

2.4 Certification by recognized bodies

Where the South African Bureau of Standards has issued a licence for the use of its Mark on products complying with any of its Specifications, only such products which carry the Mark shall be supplied. Preference will be given to plant manufactured in South Africa.

2.5 Plant and materials provided by the Employer

No plant and materials are to be provided by the Employer.

3 MANAGEMENT

3.1 Applicable SANS 1921 standards

The following parts of SANS 1921 and associated specification data are applicable:

- SANS 1921-1: 2004 Part 1: General Engineering and construction works
- SANS 1921-6: 2004 Part 6: HIV/AIDS awareness

Specification data associated with SANS 1921-1	
Clause No.	Essential data
4.1.7	There are no requirements for drawings, information and calculations for which the Contractor is responsible.
4.2.1	The responsibility strategy assigned to the Contractor for the works is 'A'.
4.3.1	The programme must conform to clause 1204 'Programme of Work' of the 'Standard Specifications' and clause 5.6 'Programme' of the 'General Conditions of Contract 2015'.
4.3.3	The Contractor must give 24 hours' notice for inspection of work that is to be covered up.
4.7.3	Where applicable, the Contractor is afforded the opportunity of pricing an item to cover costs of unavoidable overbreak.
4.12.2	The samples of materials, workmanship and finishes that the Contractor is to provide and deliver to the Employer are to be as described in clause 1205 'Workmanship and Quality Control' of the 'Standard Specifications' and clause 7 'Quality and Related Matters' of the 'General Conditions of Contract 2015'.
4.12.2	The fabrication drawings that the Contractor is to provide to the Employer are: none.
4.14.5	The Contractor is to provide latrine and ablution facilities as described in Part C 'Environmental Management Plan' in Section C3.3: Particular Specifications of these Project Specifications.
4.14.6	The requirements for the provision and erection of sign boards are as described in clause 1207 'Notices, Signs and Advertisements' of the 'Standard Specifications', and as detailed in the 'Example of Contract Signboard Details' in Section C4: Site Information of these Project Specifications.
4.17.1	The requirements for the termination, diversion or maintenance of existing services are described in clause B1202 of Part B of Section C3.2: Project Specifications.
4.17.3	Services that are known to exist on the site are described in clause B1202 of Part B of Section C3.2: Project Specifications.
4.17.4	The requirements for detection apparatus for locating underground services are: none.
4.18	The additional health and safety requirements are described in Part E 'OHS 1993 Health and Safety Specification' in Section C3.3: Particular Specifications of these Project Specifications.

3.1.1 Additional clauses

3.1.1.1 Site meetings and procedures

Site meetings shall be convened 'Monthly Site Meetings' of the 'Standard Specifications'. The Contractor shall keep on site a set of minutes of all site meetings, daily records of resources (people and equipment employed), a site memoranda book, a complete set of contract working drawings and a copy of the

procurement document, and shall make these available at all reasonable times to all persons concerned with the contract.

3.1.1.2 Water and electricity

The Contractor is to provide water and electricity ‘Water’ and 1404 ‘Services’ of the ‘Standard Specifications’.

Specification data associated with SANS 1921-6	
Clause No.	Essential data
4.2.1(a)	A qualified service provider is one that is an accredited or provisionally accredited training service provider in the HIV/AIDS field. A list of accredited service providers can be obtained from the Construction SETA (CETA) (tel. 011 265 5900), Health and Welfare SETA (HWSETA) (011 622 6852) or on the Health and Welfare SETA website: www.hwseta.org.za .
4.2.1(a)	The HIV/AIDS awareness programme is to be repeated at four monthly intervals throughout the duration of the contract.

3.2 Recording of weather

The Contractor shall erect a rain gauge and record the rainfall ‘Standard Specifications’. This information together with other details of the prevailing weather conditions shall be recorded in the daily site diary.

3.3 Unauthorised persons

The Contractor shall keep unauthorised persons away from the Works at all times. Under no circumstances may the Contractor’s personnel be accommodated on the site.

3.4 Management meetings

Management meetings are to be held bi-weekly at a time convenient to all concerned, to discuss planning and health and safety amongst other things. Attendance by the Contractor’s and the Employer’s Agent’s representatives on site is mandatory, and attendance by other interested parties will be by invitation.

3.5 Forms for contract administration

The Employer’s Agent’s representative will provide standard forms for ‘Site Diary’, ‘Site Memoranda’, ‘Requests for Inspection’ and any others deemed to be necessary during the contract.

3.6 Electronic payments

Payments of approved payment claims will be made electronically upon submission of the Contractor’s banking details.

3.7 Daily records

A site diary is to be compiled jointly by the Contractor's and the Employer's Agent's representatives on site and is to be agreed and signed by both parties. The original signed copy is to be retained by the Employer's Agent's representative.

The Contractor is to keep daily records of people and equipment on site in a format to be agreed by the Employer's Agent's representative and is to provide copies to the Employer's Agent's representative when requested.

3.8 Payment certificates

Details of measurements, proof of payment for items contained in provisional sums, proof of ownership of materials on site and documentation pertaining to contract price adjustment and special materials, are required as substantiation of claims for payment.

3.9 Permits

No security/ entrance permits are required by the Contractor's personnel to enter the site.

3.10 Proof of compliance with the law

There are no requirements for the Contractor to verify compliance with any legislation.

PROJECT SPECIFICATIONS

GENERAL WORK SPECIFICATION

The contractor shall allow for the following specific requirements of Greater Tzaneen Municipality:

- Provide for GTM staff to witness FAT and SAT testing procedures, including transportation, accommodation and daily subsistence costs. The tenderers shall make provision for 4 GTM staff members to witness testing.
- In addition to the specific requirements of Greater Tzaneen Municipality, detailed above, the contractor shall allow for his own preliminaries and/or overhead costs as required for the execution of the contract. It shall be divided into the following two sections:

Contractual Requirements:

- Fixed Amount items such as:
 - Contractual requirements.
 - Establishment of facilities on site such as plant, sheds, water, electricity, lighting, etc. removal of facilities from site after completion of work.
 - Any other fixed-charge items.
- Time related items such as:
 - Contractual requirements.
 - Operation & maintenance of facilities on site.
 - Supervision.
 - Company and head office overhead costs.
 - Other time related items.

The project requires the installation and commissioning of a SCADA system for GTM and other related works.

The works are separated into specific work packages as follows:

- Package 1: Installation and commissioning of SCADA equipment, to be free issued to the Contractor.
- Package 2: Supply and installation of SCADA equipment, as specified, to enable the monitoring and control of outdoor pole mounted circuit breakers (PMBs) on the GTM electricity distribution network, and integration of this system into the GTM Master Station.
- Package 3: Optic fibre works, including fault tracing and repairing of the existing GTM optic fibre system. Also, the supply and installation of new optic fibre cable, to extend the existing GTM optic fibre network.
- Package 4: Repairs to the Tzaneen Main Substation Control Room.

PACKAGE 1: SCOPE OF WORKS FOR INSTALLATION AND COMMISSIONING FREE-ISSUE SCADA EQUIPMENT

INTRODUCTION

GTM has engaged a Contractor, for the supply and testing of SCADA equipment. This project is defined as Phase 1 of the GTM SCADA implementation, and thus this Contractor is referred to as the Phase 1 Contractor in this document, and the Phase 2 Contractor is expected to accept the procured equipment, install at the various substations, commission and hand over a fully functioning system to GTM.

SCOPE OF WORK

- Collection and transportation of the procured SCADA equipment, and transportation to the different substations on the GTM network. The substations, and the relevant coordinates, are listed under Table 1.
- Installation of the SCADA system which involves physically connecting the hardware components, configuring the software, and testing the system to ensure that it is functioning properly.
- Integration of the SCADA system with the existing distribution network infrastructure, including any other control and monitoring systems that are already in place.
- Commissioning and training.
- Maintenance and support for a 12-month period after commissioning.

GTM DISTRIBUTION NETWORK OVERVIEW

The GTM has identified 32 substations that the SCADA system must provide visibility and remote-control capability for. These are listed below in Table 1.

Table 1: GTM Network Substations

GTM SCADA SITES TO BE COVERED			
No	Substation	Latitude	Longitude
HV Substations			
1	Tarentaal Rand Main Sub	23°49'27.73"S	30°18'37.13"E
2	Tzaneen Main	23°49'38.94"S	30°10'40.64"E
3	Tarentaarand T-Off	23°49'12.36"S	30°18'18.49"E
4	Letsitele Main	23°51'42.32"S	30°24'0.78"E
5	Rubbervale	23°54'16.65"S	30°32'59.25"E
6	Western Sub	23°50'29.23"S	30° 9'11.96"E
MV Switching Stations			
7	Old SAR SS	23°49'30.89"S	30° 9'43.34"E
9	Skirving and Loop (SS1)	23°49'35.67"S	30° 9'30.99"E
10	Skirving and Peace	23°49'47.95"S	30° 9'39.12"E
11	Claude Wheatley (SS 2)	23°50'12.45"S	30° 9'51.29"E
12	Aqua Lane (SS 3)	23°48'56.74"S	30° 9'18.07"E
13	Adam Circle	23°50'6.38"S	30° 9'16.87"E
14	Church Sub	23°49'5.32"S	30° 9'29.40"E
15	Prison Sub	23°49'59.51"S	30° 8'28.54"E
MV Substations			
16	Campsies Glen	23°43'51.60"S	30° 7'24.87"E

GTM SCADA SITES TO BE COVERED			
No	Substation	Latitude	Longitude
17	Politsi	23°46'14.26"S	30° 6'42.68"E
18	Avondshoek	23°46'54.80"S	30° 6'59.69"E
19	Middelkop	23°48'32.42"S	23°48'32.42"S
20	Rooikoppies	23°49'6.96"S	30° 3'56.01"E
21	Hotel	23°53'22.58"S	29°59'42.15"E
22	Haenertsburg	23°56'44.41"S	29°56'35.36"E
23	New Orleans	23°55'22.76"S	30° 2'50.83"E
24	Blacknoll	23°52'4.61"S	30° 8'36.50"E
25	Manorvlei	23°48'46.75"S	30°10'23.72"E
26	Taganashoek	23°46'42.48"S	30°22'50.87"E
27	La Cotte	23°42'47.97"S	30°34'59.10"E
28	Eiland	23°40'6.70"S	30°38'46.12"E
29	Waterbok	23°42'17.44"S	30°46'59.72"E
30	Valencia	23°51'37.00"S	30°16'45.97"E
31	Laborie	23°47'23.95"S	30°28'54.88"E
32	Pleins	23°50'14.91"S	30°25'57.09"E
33	Henley	23°46'2.83"S	30°32'19.60"E

GTM SCADA SYSTEM OVERVIEW

The tenderer will install and commission a SCADA system, with components to be free-issued to them by GTM and / or the Phase 1 Contractor. This section presents the overview of the SCADA system components, and foreseen implementation.

The Greater Tzaneen SCADA system is designed to provide the following key functions:

- Display the IEDs/Eds equipment real-time status relevant to the data-points available from the various point of the power system.
- Data acquisition and storage of critical substation equipment states and alarms. The various data-points are archived in the SCADA system database for trending (generating graphs) and for future use and reference.
- Monitor and control all the substation from a central station located at the main Tzaneen station.
- Generate and store alarms based on real-time evaluated conditions.
- Assignment of access authorized levels to ensure proper allocation of monitoring and control tasks.
- Exporting of archived data in csv file format for analysis.
- Secure remote access to the SCADA system for off-site substation equipment monitoring and events analysis.
- Historical sequence of data events to ensure quick fault-finding and for post event analysis.

The SCADA interfaces the data from the different substation equipment to a common communication framework where data is transmitted, displayed, stored, analysed, and exported for more detailed analysis.

Figure 1 below provides an overview of the proposed GTM SCADA system architecture.

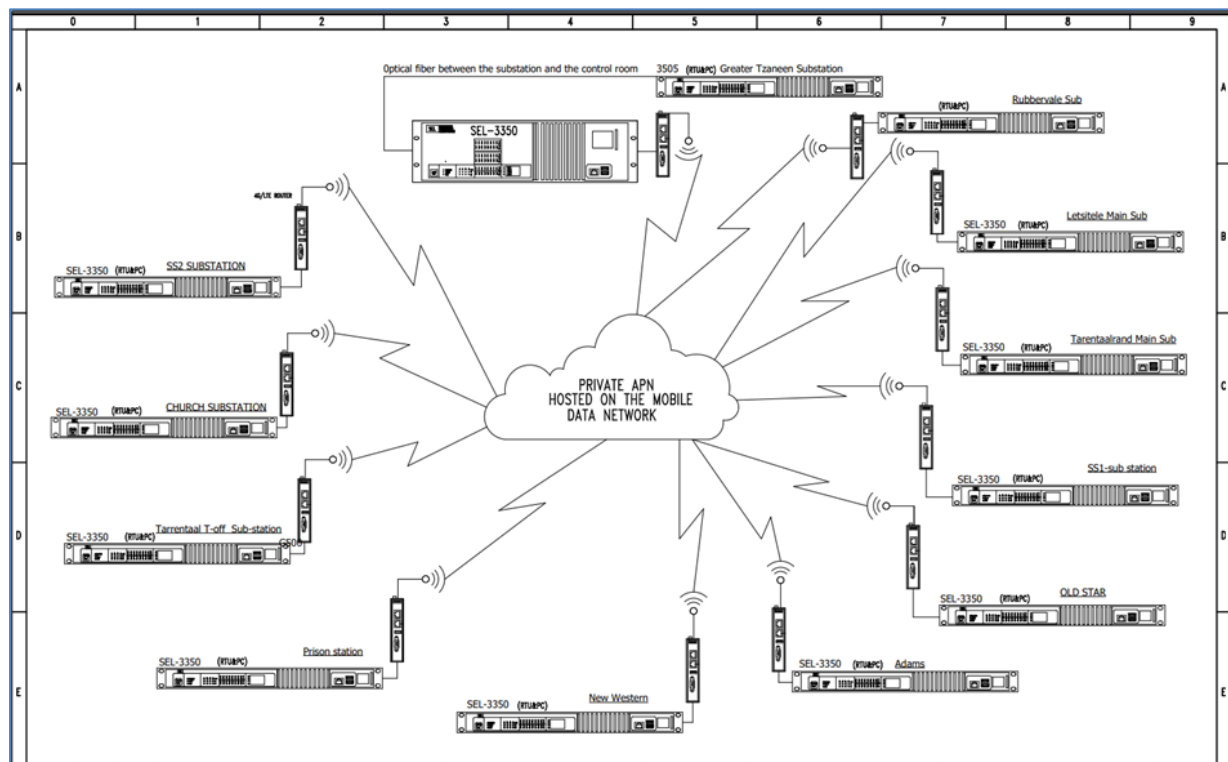


Figure 1: SCADA Overview

The sub-sections below will provide a detailed description of each component of the system. The SCADA system for the Greater Tzaneen power system, will comprise of the following main components.

- Substation SCADA HMI
- SCADA Server
- SCADA Gateway
- SCADA network
- SCADA Data Acquisition Devices
- Monitored substation equipment

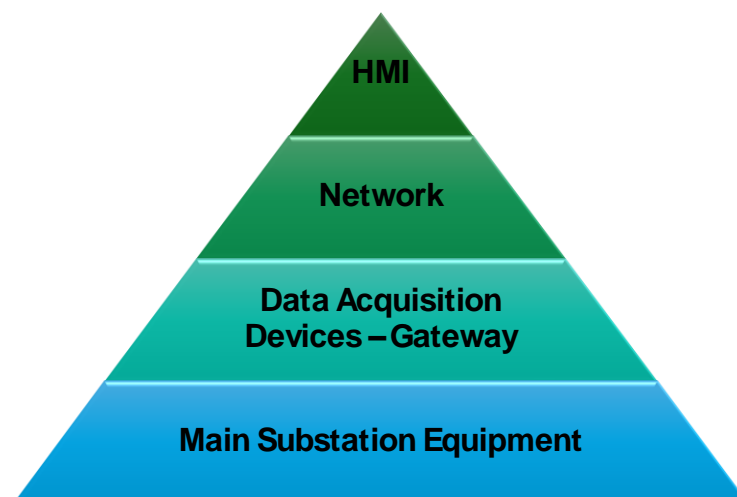


Figure 2: SCADA Hierarchy

SCADA HMI

The HMI mimics will be developed on a 1920 x 1080 resolution. The mimic navigation buttons will be at the top of the screen, with each navigation button positioned adjacent to the previous one. All the mimic navigations are carried out via a mouse click of the button. An alarm and events message window is positioned at the upper top of the screen and is always visible to alert the Operator of any new alarm. A 1-line fixed window displays the name of the active mimic just below the alarm and message window. The remainder of the screen is used to display the active mimic. The mimics will be displayed on a 22-inch monitor.

The Human Machine interface (HMI) will be developed to allow for easy monitoring of the substation equipment from the main Tzaneen station. The Operator can navigate the HMI through easy screen navigation buttons and is alerted of critical alarms and events by a visible alarm and events window on the HMI.

The HMI will be designed using the software that provides standard function modules for the display of graphic diagrams and views for alarms, archiving and logging of acquired values. Also, the software should provide high data availability due to its powerful process interface, fast display refresh rates and safe data archiving functions.

SCADA HMI Pages

The SCADA HMI pages, also referred to as mimic pages are designed and grouped according to the particular substation. Each mimic page provides information for the section for which it is designed. The following SCADA mimic pages will be designed and will be opened from the mimic navigation buttons at the top of the overview main window.

HV (132/66 kV) section single line diagram MV (33 / 11 kV section single line diagram UPS Status and Measurements HVAC and Fire System status	Alarms and events Trends for measured values Network architecture (Diagnosis) Battery Tripping Unit Status
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The HMI mimics will be developed on a 1920 x 1080 resolution. The mimic navigation buttons will be at the top of the screen, with each navigation button positioned adjacent to the previous one. All the mimic navigations are carried out via a mouse click of the button. An alarm and events message window are positioned at the upper top of the screen and is always visible to alert the Operator of any new alarm. A 1-line fixed window displays the name of the active mimic just below the alarm and message window. The remainder of the screen is used to display the active mimic. The mimics will be displayed on a 22-inch monitor.

To give more details on specific equipment on the mimic, the HMI will be developed to provide a drill-down function into the specific status. The HMI will also provide the operator with a dynamic

representation of the substation SLD and give a view of the switching and operating states of all the switchgear and other equipment.

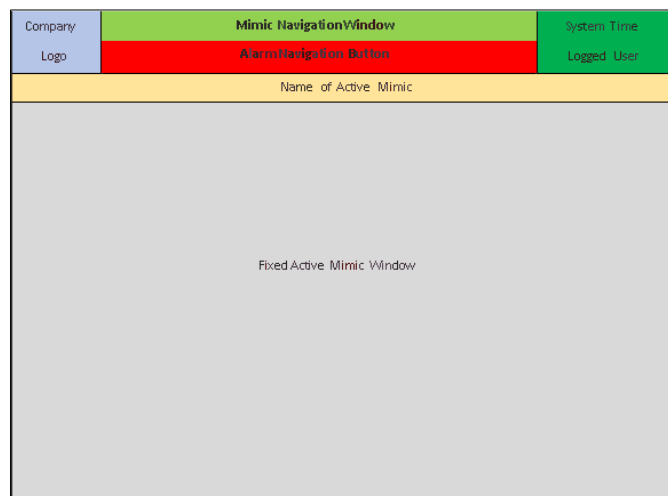


Figure 3: HMI Navigation

SCADA Graphics

The SCADA graphic object library provides power network graphic objects that will be used to create the SCADA graphics. The graphic objects provide a dynamic display and representation of the electrical equipment. The graphical representation of the SCADA objects (e.g. circuit breaker) is based on the ANSI /IE EE 315 1975 (R1 995) standards.

The Circuit Breaker, the Disconnecter and the Load Break Switch are available as switching devices within the library as shown below.

View	Circuit Breaker	Disconnecter	Load Break Switch	Earth Isolator
SICAM style				
based on DIN 42200				
based on IEC 445				
based on LSA				
based on LSA (alternative; LSA-2)				

Figure 4: HMI Graphic Objects

Predefined colours will be used for standard graphic object colour convention of switching devices. The predefined colours allow dynamic representation of the different states of the switching device as shown by the native SICAM switch control below. The switch status will be represented by small, coloured rectangles next to the switch.

The following predefined colours will be used as standard graphic object colour convention for a double point breaker.

EQUIPMENT STATE	BITS	VALUE	COLOUR	OBJECT STATE
ON	10	2	Red	Switch closed
OFF	01	1	Green	Switch open
Intermediate position	00	0	Yellow	Switch on/off dashed
Disturbed	11	3	Yellow	Switch on/off dashed

Figure 5: Pre-Defined Graphic Colours

The SICAM SCC HMI will be configured to represent the different voltage levels at the substation using different colours on the SLD. The following voltage level colours are proposed for configuration and are subject to approval by the client's Engineer. If the voltage level colours are to be changed, that will be done during SCADA development after getting the preferred voltage level colours from the end user:

- 132kV – BLACK
- 66kV – GREEN
- 33kV – BROWN
- No voltage online or busbar – WHITE

Alarm and Event Management

The alarms and events will be logged in correct chronological order of occurrence and displayed by the Alarm Control component of the ac-Selector Diagram builder. The Alarm Control also provides an option to select (filter) the alarms to view and to export the archived alarms in CSV format for analysis using a spreadsheet application. All the messages will be displayed as separate message lines with the following additional information provided:

Table 2: Alarm and Event tags and descriptors

Alarm	Description
Value	current state that is raised, cleared, on, off, open, close, etc
Message group	source of the alarm, for example transformer 1, feeder 5, etc.
Message text	tag name
Cause	cause of transmission
Status (validity)	valid, invalid, not topical, overflow, etc
Time	actual time when the alarm was raised
Date	actual date when the alarm was raised
Username	the currently logged in user

The alarms will be displayed in different background colour depending on their status, as given below;

- Red - Active and unacknowledged alarm
- Green - Cleared alarm
- Orange - Active and acknowledged alarm

All events which do not constitute an alarm, such as the change of the state of a device or a command given will be configured on a separate Events List and will be displayed on a white background. The following is a typical alarm list.

VALUE	STATUS (VALIDITY)	CAUSE	Ackno...
CLEARED	valid	general interrogation	
CLEARED	valid	general interrogation	
RAISED	valid	general interrogation	

DATE	TIME	MESSAGE GROUP (BAY/CIRCUIT/DEVICE)	DESCRIPTION
17/07/2014	17:17:38.473	TRANSFORMER 304+STA201	Synchronous condition
17/07/2014	17:17:38.473	TRANSFORMER 304+STA201	Failure Ph1130 Modu
17/07/2014	17:17:38.473	TRANSFORMER 304+STA201	Synchronous condition

Figure 6: Typical Alarm List

Tag Logging and Archiving

The archive system will be configured to automatically archive substation alarms and process values into a short term and long-term archive with a continuous archiving cycle. The Trend Control and report functions will be used to access the archives, and to display the historical data as trends. During operation, the data will be archived continually on the server and the system automatically manages the allocated memory space by deleting the oldest archive segment when the allocated memory is full.

For the 512 archive tags provided and for the hard drive size selected for the SCADA servers, and with the daily maximum archive segment configured to be a total of 400MB, the archived data in the main directory can be stored for up to two years. The diagram below shows the archiving principle.

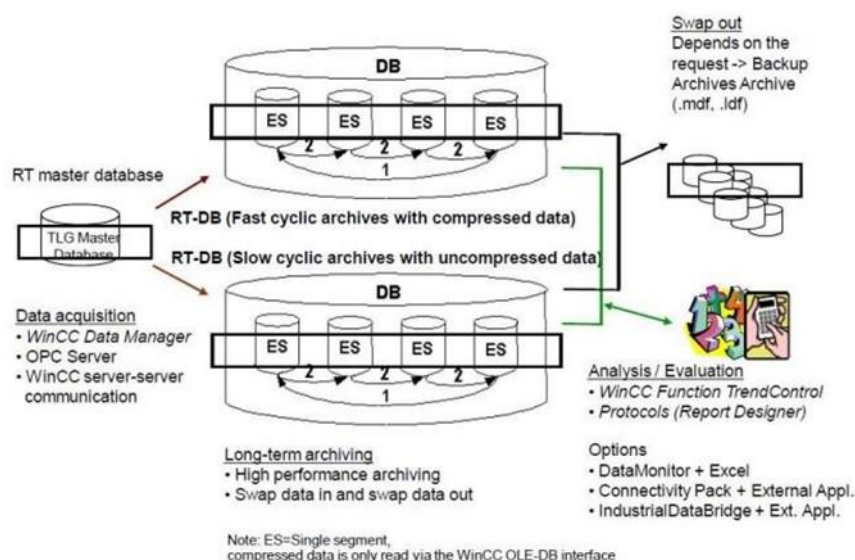


Figure 7: Tag Logging and Archiving Principle

Data Logger

The Analog Data Logger provides a variety of means to monitor and record analog input point value changes into data files that can be retrieved by the user. A variety of recording methodologies are supported including, continuous, Periodic, time weight, Out of Range and Triggered by a digital input point.

Trend Viewer

All data recorder by the Analog/Digital Data Logger can be viewed by Digital event recorder using the built-in web-based trend viewer, Users can select the range of data to be used by time and date, alternatively a real time streaming view can be displayed on a single view and support for curve fitting is available.



Figure 8: Typical Trend Page

The SCADA configuration will allow trending of archived measured values (analogues) and digital tags using the WinCC Online Trend Control function. A total of 512 tags will be archived with the license that

will be provided. The trends will be fully configurable in terms of line type, color, axis scales, and number of trends on the display. The Operator will be able to select the beginning of the trend curve and to spread the ordinate, i.e. "zooming" in or out of the trend. Trends will also have a table showing the actual instantaneous values every time the tag value is updated.

The ac-Selector Diagram builder Online Trend Control function also has a function to export archived data in CSV file format that can be analysed or used in a spreadsheet application like Microsoft excel. The tags and time range of the archive data to be exported will be selectable. The following is a typical trend from the ac-Selector Diagram builder Online Trend Control.



Figure 9: Example Trend Page

- On (1): **Trending:** Compare real-time and historical trends,
- On (2): **Relay Events:** Correlate relay event records to the system response. Select the event report to see the relay oscillography.
- On (3): **Phasor Scope:** Visualize phase angle separation between measurements to determine system stress.
- On (4): **Timeline:** Use the timeline to seamlessly transition between real-time and historical data.

SCADA Servers

The SCADA system will be a redundant system consisting of two servers running in parallel. Each server should provide a communication to the devices. One server is the Master server, and the other server is the redundant partner server.

Both connections are active in case of fault-free operation. Commands are only issued by the Master server. The redundancy software package for data synchronization and for the control of server redundancy should be running on both servers for synchronizing the archives after the server has come back online after failure. The connection of the redundant servers will be as shown below.

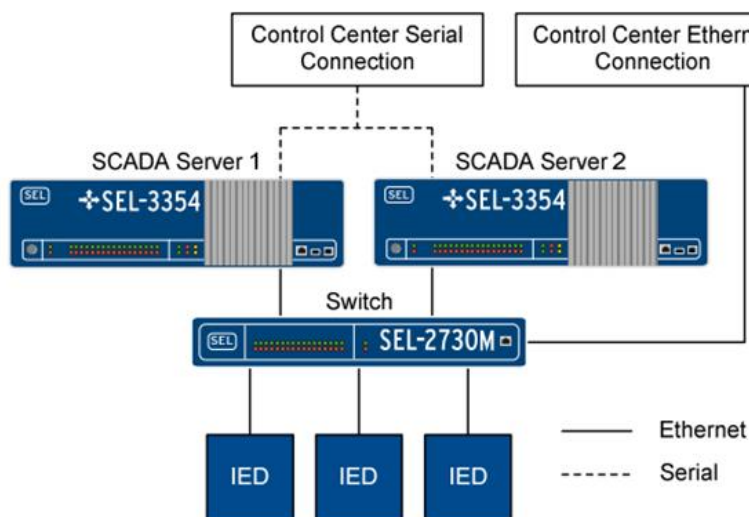


Figure 10: Master Station Redundancy Configuration

Combining SEL computers with the robust SmartGateway software package from Survalent Technology provides the ideal platform for SCADA server or gateway applications, or even for human-machine interface (HMI) purposes, if required.

Two of the most important aspects of any supervisory system are reliability and availability. Using tough computers in a redundant scheme provides for both of these aspects. Figure 10 shows an example SCADA server setup using the SEL-3354 Embedded Automation Computing Platform and SmartGateway software. The SEL-3355 Computer can be used instead of SEL-3354 for the SCADA server or gateway.

Substation Switch

The SCADA network backbone switch is an industrially hardened, fully managed, modular, Ethernet switch specifically designed to operate reliably in electrically harsh and climatically demanding utility substation and industrial environments, operating in the temperature range of - 40°C to 85°C.

The RSG2300 provides improved system reliability and advanced networking features like Enhanced Rapid Spanning Tree (eRSTP), VLAN double tagging, port configuration, status, statistics, mirroring, security, loss of link management on fibre ports, SNMPv2. Its configuration and deployment are supported by the web-based, Telnet and Command Line Interface management interfaces making it ideally suited for creating Ethernet networks for substation SCADA systems.

SCADA Gateway

The MCP (Multi-function Controller Platform) makes it possible for a single device to host multiple functions and applications such as:

- Supervisory Control and Data Acquisition (SCADA) Concentrator,
- Remote terminal Unit (RTU),
- Human Machine Interface,
- Advanced Cyber Security Features, and

- Non-Operational Data Storage.
- Consolidation of functions reduces the cost of deployment and operation while increasing system reliability through a reduced number of devices in the system.

The gateway will perform the following functions in the SCADA system:

- Collecting data from the substation IEDs and other controllers on the network.
- Processing the collected information to make it available to the SCADA.
- Receiving control signals from the SCADA and sending the control (switching) commands to the substation devices.
- Providing connectivity to the substation systems by converting data from different standard communication protocol to another.

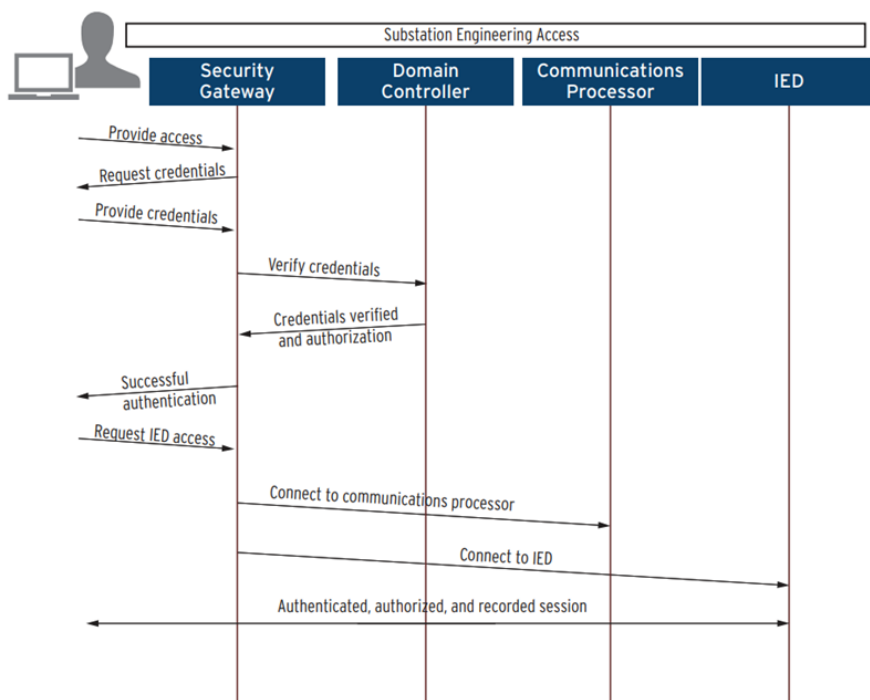


Figure 11: Proposed Gateway Structure

The data (tag values) will be acquired by the gateway through a polling mechanism, which is the sending of requests to devices at preset interval of 5 milliseconds. If 3 seconds elapse before the gateway receives the response for a sent request, the device will be considered not reachable.

The SCADA system should provide a reliable and accurate collection of data (metering, status, events and faults) from serial or LAN-based intelligent substation devices to master applications such as:

- SCADA,
- EMS,
- DMS,
- DCS or other enterprise applications.

With its modern and robust cyber security features, the SCADA is designed for smooth integration into NERC CIP and cyber security environments while consolidating functions such as Ethernet communications, time synchronization, HMI and SCADA applications.

Data can be simultaneously presented to multiple SCADA hosts of different communication protocols. The SEL-3530 comes with a built-in suite of communication protocols to facilitate communication with various devices and SCADA hosts, including:

- DNP3 serial and IP (client & server)
- IEC 61850 Ed.1 and certified Ed.2 (client)
- D.20 Link
- Modbus™ serial & TCP/IP (client & server)
- IEC60870-5-101/103/104 (client)
- IEC60870-5-101/104 (server)
- SEL Binary (client)
- Generic ASCII protocols (client)

Advanced Automation

The SEL-3530 acts as a centralized, substation-hardened computing platform within an advanced automation system. With its advanced IEC 61131 compliant programmable logic tool, users can create simple to complex custom programs for a variety of automation applications.

Math, Logical, Timer control Logic

Using the calculator tool, users can create advanced solutions that group, manage and control points to produce the required, automation results.

The calculator tool can perform mathematical, logical, or timer-based operations on data points stored in the RTU. Using a graphical interface, users can define logical expressions using mathematical functions such as addition, multiplication, logarithms, greater than, less than, as well as other Boolean functions.

IEC 61131-3 Compliant Programmable Logic

For more advanced applications, programmable logic (Logic linx) software provides PLC functionality. Logic Linx offers textual and graphical languages defined in the IEC 61131-3 standard for PLC programming environments, including Sequential functions Chart, Instruction List, Structured Text, Ladder Diagram and Function Block Diagram. In addition, a wide range of arithmetic, Boolean and logical operations are supported.

Control Lockout

The control lockout feature ensures that only a single master station can access a group of controls at one time. Can lock out groups of controls to allow for safer local maintenance.

Users can create up to 8 remote control groups and up to 256 local control groups. Any digital output can be included in one remote and one local group. This provides a coordinated control of outputs and ensures that the right control actions are executed by the appropriate devices.

Redundant I/O

To improve the reliability and availability of data for critical processes, it is useful to specify a secondary data point. Just as it is important to have a back-up (redundant) device, it is also useful to have a back-up (redundant) point that represents a real primary point. The value and quality of the redundant point is reported when the associated primary point is invalid or questionable.

Substation BTUs

The BTUs will be installed as two separate systems, one dedicated for the 66kV switchgear and the other for the 33kV switchgear. Each system will have 3CR12 Steel cabinets housing the KPL100 Nickel Cadmium batteries (for 66kV switchgear), KPL200 Nickel Cadmium batteries (for 33kV switchgear), 110V DC Rectronic Switchmode battery charger and 110V DC distribution board. Every 3CR12 cabinet will be equipped with the Rectronic SM12 Supervisory module for monitoring and controlling of system float voltage as temperature varies to ensure optimum charging and discharging of the batteries.

The Rectronic SM12 Supervisory module also collects alarms from the system components, display alarm status and provides an RS485 port for Modbus communication with SCADA system. The SCADA will monitor the BTUs by accessing the data from the SM12 Supervisory module. To convert from Modbus RS485 to TCP/IP, the SM12 module is connected to a Moxa Mgate MB3170I, an RS485-to-TCP/IP Modbus gateway equipped with two Ethernet ports for redundant connection to the two substation switches.

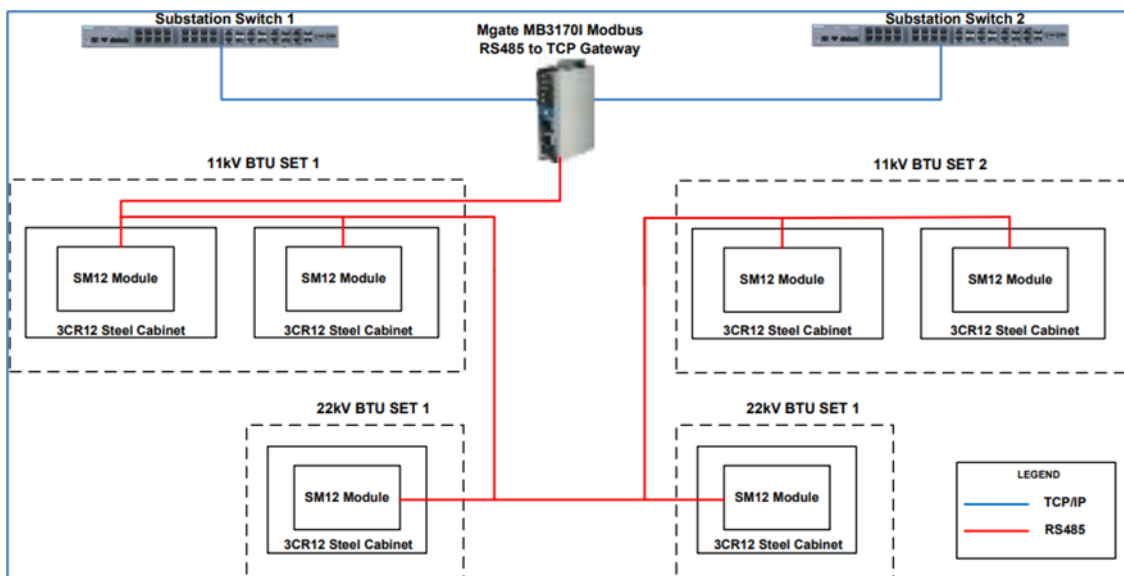


Figure 12: BTU Network Connection

GPS Time Server

The Meinberg LANTIME M300 is the time server that will be used to provide accurate and high precision time synchronization to all systems on the substation TCP/IP network using Network Time Protocol (NTP). NTP distributes absolute time across a substation network directly over Ethernet, achieving synchronization accuracies in the range of milliseconds. Accurate time stamping is essential for secure and efficient recording of all the substation events on SCADA. All the events will be recorded in their correct and chronological sequence of occurrence which is important when it comes to faulty finding or root cause analysis.

An internal built-in GPS radio clock will be connected to a GPS antenna to receive reference time from the GPS signal. The time server has two Ethernet ports for redundant connection to the two main switches.

Remote Access

Sensible, Manageable, Scalable cybersecurity solutions,

Protected Device Password Management

Manage IED passwords quickly and efficiently with the SEL-3620. Enforce strong passwords on IEDs that automatically change on a configurable schedule, and ensure that no default or weak passwords are in use on critical networks. Users only need to know their own password, not the IED's.

User Access Control

Query Microsoft Active Directory using LDAP or RADIUS. System administrators can easily add and remove user-based account access and authorized access levels to specific devices from a central location.

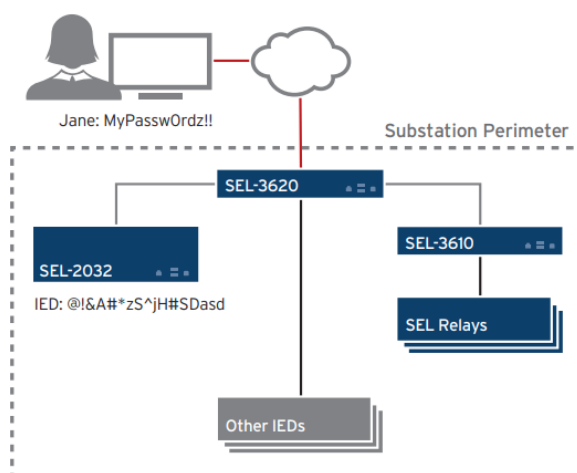


Figure 13: TOSIBOX Connection Layout

User Activity Reports

Provide granular reports that correlate unique users to individual IED commands. Thoroughly log all user activities on protected devices to know exactly who did what and when. Users with appropriate privileges can download connection reports for detailed user activity audits and to provide maximum user accountability.

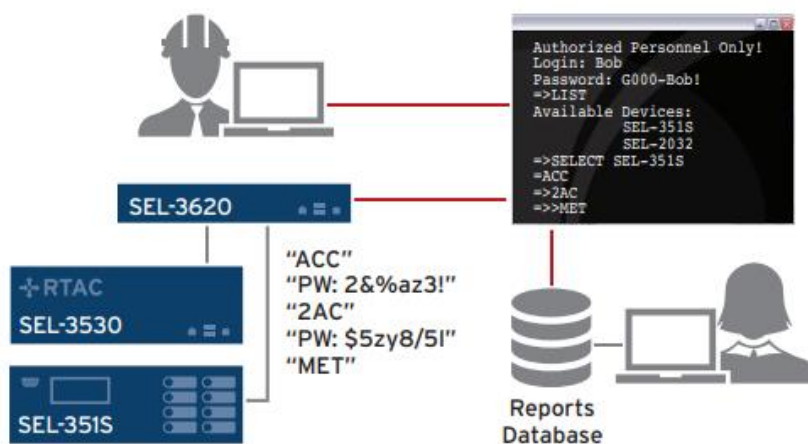


Figure 14: User Activity Reports

SCADA User Rights and Privileges

HMI page navigation, alarms acknowledgement, sending command and stopping of the SCADA application are operations that will be performed only by a user with privileges. The user will have to log in to the system to have access to all the assigned privileges.

The following are the broad authorization privileges that will be assigned to users to access the different SCADA applications:

- **ADMINISTRATOR:** Has access to all the possible functionalities of the SCADA (can configure and change system settings, navigate between mimic pages and stop the application).
- **SPECIALIST:** Has access to the basic SCADA functionalities, as well as access to change system settings and any other specialist functions.
- **MAINTENANCE:** Has access to the basic SCADA functionalities, as well as other maintenance-related functions.
- **SUPERVISOR:** Has access to the basic SCADA functionalities and has additional operating functions that have restricted access.
- **OPERATOR:** Has access to the basic SCADA functionalities (sending commands, acknowledging alarms and navigating between mimic pages), but cannot stop the SCADA system.
- **GUEST:** Can only access the mimic pages without performing any action like executing commands or the acknowledgment of alarms.

The system will be configured to automatically log out a user after an idle time of more than 10 minutes. The logged in user can manually logout of the system before 10 minutes idle time has elapsed, by clicking

the System logout window shown above. In the event of a user attempting to perform an operation which he is not privileged to perform, the system denies the operation and gives the following pop-up window:



Figure 15: Operator Not Authorised Window

SCADA Automatic Starting

The SCADA system will be configured to automatically restart after a server boot or reboot. This will be configured red on the "AutoStart" application to automatically launch the SCADA application and return to the main overview page without any input requirement from the operator.

SCADA Communication Protocols

All the SCADA communication will be redundant to provide failover in the event of an unexpected break or failure in the network. The substation main switches will be connected to every device or network segment using either optic fibre ring or Ethernet cable in a redundant star topology. The following communication protocols will be used in the SCADA network.

- IEC 61850
- IEC 60870-5-104
- Modbus TCP/IP
- DNP-3
- SEL proprietary Protocol

PACKAGE 3: SCOPE OF WORKS FOR TELEMETRY ON OUTDOOR POLE MOUNTED CIRCUIT BREAKER SITES

INTRODUCTION

The GTM distribution network consists of a number of outdoor 33 kV switching and / or transformer sites. The Contractor will supply and install a suitable system that will provide visibility and remote control of these sites at the GTM SCADA Master Station and Control Room, located at the Tzaneen Main Substation.

SCOPE OF WORK

- Supply and installation of the following components at each pole mounted breaker site:
- MODBUS RTU.
- Dual SIM 4G/LTE Router complete with high gain antenna.
- 4G / LTE Signal Repeater Kit.
- Outdoor Enclosure IP66 450x300x220mm GREY complete with terminals and trunking and mounting brackets, to house the SCADA equipment.
- Integration of the PMB telemetry system into the Master Station at Tzaneen Main Substation and ensure full visibility and control of each PMB site.
- Commissioning of the system
- Comprehensive Training for GTM personnel.

***PACKAGE 4 SCOPE OF WORKS: REPAIRS TO THE TZANEEN MAIN SUBSTATION
CONTROL ROOM***

SCOPE OF WORK

- Repairs to the existing Control Room at the Tzaneen Main Substation, including:
- Re-plaster and re-paint all walls.
- Re-tiling the floors.
- Remove the exiting ceiling and replace with new.
- Supply and Install new air conditioners, 12,000 Btu capacity.
- Remove all weeds and debris from the complete extent of the substation site, and discard at a GTM approved dumping site.

PARTICULAR SPECIFICATIONS

In addition to the Standard Specifications and the Project Specifications, the following Particular Specifications shall apply to this contract and are bound in hereafter:

PART C: ENVIRONMENTAL MANAGEMENT SPECIFICATION

PART D: OHSA 1993 HEALTH AND SAFETY SPECIFICATION

PART E: SMALL CONTRACTOR DEVELOPMENT

PART C: ENVIRONMENTAL MANAGEMENT SPECIFICATION

C.1 General

In order to ensure that the construction work is carried out in an environmentally sensitive manner, strict compliance with the Environmental Management Plan (EMP) guidelines is required. The purpose of the EMP is to:

- Encourage good management practices through planning and commitment to environmental issues,
- Provide rational and practical environmental guidelines to:
- Minimise disturbance of the natural environment,
- Prevent pollution of land, air and water,
- Prevent soil erosion and facilitate re-vegetation.
- Adopt the best practicable means available to prevent or minimise adverse environmental impact,
- Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of wastes,
- Train employees and contractors with regard to environmental obligations.

C.2 Training and Induction of Employees

The Contractor has a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes subcontractors, casual labour, etc.). The EMP shall be part of the terms of reference for all contractors, subcontractors and suppliers.

C.3 Complaints Register and Environmental Incident Book

Any complaints received by the project team from the public will be recorded. The complaint should be brought to the attention of the site manager, who will respond.

The following information must be recorded:

- Time, date and nature of the complaint,
- Type of communication (telephone, letter, etc),
- Name, contact address and telephone number of the complainant,
- Response and investigation undertaken and
- Actions taken and by whom.

All complaints received will be investigated and a response given to the complainant within 14 days.

All environmental incidents occurring on the site will be recorded. The following information will be provided:

- Time, date, location and nature of the incident,
- Actions taken and by whom.

C.4 Site Cleanliness and Neatness

- Location of a construction camp is to be approved by the Employer's Agent and is to be restored to its previous condition after completion of construction.
- The construction camp should preferably be fenced with a 1.8m bonnox fence or similar approved.
- All materials, equipment, plant and vehicles must be stored within the construction camp.
- A dedicated area must be made available for construction staff to change and store their personal belongings.

C.5 Access

- Access to existing roads, schools, buildings, shops and residential properties must not be impeded during construction.
- Access roads utilised by the Contractor must be maintained in good condition.

C.6 Borrow Pits

- Mining authorisations (permits) for borrow pits must be obtained from the Department of Minerals and Energy (DME) in consultation with the Department of Water Affairs and Forestry (DWAF).
- Spoil dumps resulting from borrow pits must not interfere with any natural surface drainage.
- Borrow pits must be rehabilitated after use in accordance with the requirements of DME and DWAF.

C.7 Dust Control / Air Quality

- Dust suppression measures must be implemented during construction by ensuring that all surfaces prone to dust generation are kept damp (e.g. use of water tanker).
- Ensure that vehicles and equipment are in good working condition and that emissions are not excessive.
- Special care must be taken in areas where the route passes close to schools and residential areas.
- The speed of construction vehicles must be reduced.

C.8 Fauna

- Contractor staff may not chase, catch or kill animals encountered during construction.

C.9 Fire Prevention and Control

- Smoking is prohibited in the vicinity of flammable substances.
- The contractor must ensure that fire-fighting equipment is available on site, particularly where flammable substances are being stored or used, and that construction staff are aware of where it is kept and how it is operated.
- Fires started for comfort (warmth) are prohibited, due to the risk of veld fires and risk to adjacent property owners' lands.

C.10 Grave Sites

- Gravesites in close proximity to the road must not be disturbed during construction.

C.11 Materials Handling and Spills Management

- Any hazardous materials to be used during construction (e.g. lime, fuel, paint, etc) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel/petrol tanks) must be placed on an

impermeable surface and surrounded by a bund wall, in order to ensure that accidental spillage does not pollute the environment.

- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g. smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals.
- Any spill of potentially hazardous materials must be cleaned up immediately (Potentially hazardous materials on site include paint, oil, grease, fuel, turpentine, etc).
- The area of contaminated soil or spill must be deposited into the hazardous waste container(s).
- The contractor should keep Peat Sorb or a similar absorbent on site to clean up any spills. The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

C.12 Noise

- Noise generating activities must be restricted to between 07h00 and 17h00 Monday to Friday, unless otherwise approved by the appropriate competent person in consultation with adjacent landowners/affected persons.
- All equipment, vehicles and machinery must be in good working condition and be equipped with sound mufflers if necessary.
- Construction staff must be trained and made aware of not creating unnecessary noise such as hooting and shouting.

C.13 Pollution Control

- Soil and water pollution through usage of fuel, oil, paint, bitumen or other hazardous substances must be avoided.
- All construction vehicles are to be maintained in good working order so as to prevent soil or water pollution from oil, fuel or other leaks, and to reduce noise pollution.

C.14 Rivers and Streams

- During construction of bridge structures, there must be no obstruction of the water flow of rivers and streams.
- Excavated material must not be stockpiled on or near riverbanks, in order to prevent sedimentation occurring.
- Erosion control measures must be employed both during and after construction.
- No impediments to natural surface water flow, other than approved erosion control measures, must occur.

C.15 Safety

- Safety measures, such as detour signs, must be implemented during construction to ensure the safety of workers, pedestrians and drivers/passengers in vehicles in the vicinity of construction work.
- Special care must be taken in the vicinity of schools to ensure the safety of children wishing to cross the road within the proximity of the construction site.
- Accommodation must be made for pedestrian pathways alongside the road during the construction and operation phases.
- Covid 19 protocols must be adhered to at all times.

C.16 Soil Management

- Accidental spills of contaminants onto the ground e.g. oil, concrete, fuel and chemicals should be removed together with the contaminated soil.
- If necessary an absorbent such as Peat Sorb should be used to aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and refuelling of vehicles must only be carried out at the construction camp.

C.17 Worker Conduct

Code of Conduct for Construction Personnel:

- Do not leave the construction site untidy and strewn with rubbish which will attract animal pests.
- Do not set fires.
- Do not cause any unnecessary, disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
- Do not drive a construction-related vehicle under the influence of alcohol.
- Do not exceed the national speed limits on public roads or exceed the recommended speed limits on the site.
- Do not drive a vehicle which is generating excessive noise or gaseous pollution (noisy vehicles must be reported and repaired as soon as possible).
- Do not litter along the roadsides, including both the public and private roads.
- Do not pollute any water bodies (whether flowing or not).
- No member of the construction team is allowed to enter the areas outside the construction site.

C.18 Traffic Disturbances and Diversions

- Any traffic diversions must be undertaken with the approval of all relevant authorities and in accordance with all relevant legislation.
- Wherever possible, traffic diversion must only take place on existing disturbed areas and remain within the existing road reserve.
- Traffic diversion routes must be rehabilitated after use.

C.19 Vegetation

- Only vegetation falling directly on the route must be removed where necessary.
- Alien vegetation within the road reserve must be eradicated, and management measures must be implemented for future control of these species.
- Vegetation that has been removed from large areas (e.g. on traffic diversion routes) during construction must be replaced with indigenous vegetation after construction has been completed.

C.20 Waste Management

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The contractor is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, paint, empty lime bags, contaminated wash water, etc) must be stored in leakproof containers and disposed of at a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the

surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.

- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimise the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Project Manager.
- Each working area must be cleared of litter and building waste (e.g. rubble, wood, concrete packets, etc) on completion of the day's work.
- Any spill around the container(s) should be treated as per Section C.11 and C.16.

C.21 Detailed Environmental Management Plan

C.21.1 Legal Requirements

The following legal requirements are applicable to the development:

- The National Environmental Management Act, 1998 (Act no. 107 of 1998)
- The National Water Act, 1998 (Act no.36 of 1998)
- Water Services Act, 1997 (Act 108 of 1997)
- National Environment Management: Air Quality Act, 2004 (Act 39 of 2004)
- Constitution of Republic of South Africa, 1996 (Act 108 of 1996)
- Occupational Health and Safety Act, 1993 (Act 85 of 1993)
- National Forest Act, 1998 (Act 84 of 1998)
- National Heritage Resources Act, 1999 (Act 25 of 1999)
- Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925)

C.21.2 GENERAL CONDITIONS

1. The Employer's Agent is responsible to ensure that the landowners have been informed before any work is carried out on site. Contractors must find out if the landowners have been informed before moving onto site.
2. No fences, gates or locks may be damaged to obtain access onto a line route. Arrangements must be made in advance to obtain permission for access.
3. Use of private roads must be arranged in advance. Any damage to private roads must be repaired at the contractor's expense and to the written satisfaction of the landowner.
4. Gates must be left as they are found, i.e. closed gates must be kept closed and open gates must be left open. Gates to adjacent properties or onto public roads must be closed at all times. Any gates installed on the line route must be kept closed and locked except while stringing is taking place. Open gates must be guarded to prevent animals straying into adjacent camps or properties.
5. Permission must be obtained from landowners before any private water is used.
6. No fires may be lit on private property. If fires are lit on Client's property or in the construction camp, provision must be made that no accidental fires are started. No firewood may be collected in the veld.
7. If activities that can cause a fire are carried out, fire extinguishers must be available on site and in the construction camp.
8. No property may be accessed after normal working hours except with the permission of the landowner. Privacy must be respected at all times.
9. The contractor and their employees must at all times be courteous towards landowners, tenants and the local community.
10. The contractors and their employees may not cause damage to property, crops or animals. Activities that may cause conflict with landowners, tenants, the local work force or the local community must

be avoided. Should conflict arise it should immediately be reported to the Employer's Agent.

11. Vehicles must be driven at a moderate speed on private roads and stay within the statutory speed limit on public roads.
12. All movement of vehicles must take place on the established servitude road or on private roads as agreed in advance. No movement may take place through the veld. Special care must be taken to prevent excess damage during wet weather.
13. If any vehicle should get stuck, the damage must be repaired immediately so that no deep ruts remain.
14. Any damage to private property must immediately be reported to the Employer's Agent and the owner. The damage must be rectified immediately if possible or else appropriate compensation must be paid to the owner. Record of damages and rectifying action must be kept. The landowner's satisfaction with the outcome of rectifying action must be obtained in writing.
15. A proper system of waste management must be instituted in the construction camp and batching plants. This entails that sufficient waste bins are available on site and in the construction camp. The waste should preferably be dumped at an approved waste disposal site. If this is not possible a site which satisfies existing legislation and Client standards should be established with the permission of the landowner. No containers, scrap metal, conductor etc. may be left on site.
16. Such scrap must be removed and taken to an appropriate disposal site. No oil, diesel or other chemicals may be spilled or discarded anywhere. If an accidental spill occurs, it must be reported immediately and cleaned to the satisfaction of Employer's Agent and the landowner. No waste may be left in the veld or on the line route.
17. Washing and toilet facilities must be provided on site and in the construction camp. The facilities must comply with legislative standards and have the approval of the landowner and Employer's Agent.
18. No human excrement may be left in the veld. If no toilet facilities are available such waste must immediately be buried.
19. Herbicides may only be applied with Employer's Agent's permission and according to the Legislated Policy on Herbicides.
 - (a) Camp, office sites and batching plants must be removed after completion of the contract. The site must be rehabilitated to as close as possible to its original condition.
 - (b) All excavations must be enclosed to prevent animals or people from accidentally falling into excavations.
 - (c) No trees may be cut or removed without prior permission from the landowner. Permits should be obtained for protected trees (protected trees should be dealt with in **Special conditions**)

SPECIAL CONDITIONS

(Specific issues identified during the Screening needing attention i.e. erosion berms, bird flappers, protected trees etc.)

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PART D: OHSA 1993 HEALTH AND SAFETY SPECIFICATION

D.1 SCOPE

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy working environment for all employees, subcontractors, the Employer, the Employer's Agent, inspectors and all other persons entering the site of works.

This specification shall be read in conjunction with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993 and the corresponding Construction Regulations 2014, and all other safety codes and specifications referred to in the said Act and Construction Regulations. This include all relevant Covid19 regulations and protocols.

In terms of the OHSA Agreement in Section C1.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible for compliance with all provisions of OHSA 1993 and the Construction Regulations 2014.

This specification and the Contractor's own Health and Safety Plan as well as the Construction Regulations 2014, shall be displayed on site or made available for inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees, representative trade unions and any other persons entering the site of works.

D1.1 Information based on the Employer's baseline risk assessment

The information presented in this subclause D1.1 is based on the Employer's baseline risk assessment prepared specifically for this contract.

This information describes the type of work required in terms of this contract that will be accompanied by dangers, hazards and risks which the Contractor shall be required to identify, analyse, manage, monitor and review in terms of the Health and Safety Plan and risk assessments.

This information is neither prescriptive nor exhaustive, and is provided as a guideline to Tenderers in preparing their tender submissions, and to the successful Contractor as a basis for the preparation of the site specific risk assessments to be performed by the Contractor in terms of Construction Regulation 9.

Tenderers shall make their own assessment of the dangers, hazards and risks that can be expected during the course of this contract, which may include dangers, hazards and risks not identified in the baseline risk assessment, including those that may arise from specific methods of construction employed by the Contractor, and shall make due allowance in their tendered rates and prices for all costs related to complying with the provisions of the Act and Construction Regulations.

This information is given in good faith for the guidance of Tenderers, and no additional payment shall be made as a result of any inaccuracies, discrepancies or omissions contained therein.

The following aspects of this project carry the risk of possible injuries:

- Structure falling during assembly.
- Covid 19 infections.
- Working at heights.
- Operation and maintenance on the site of heavy plant such as excavators, overhead crane, bulldozers, front end loaders, tippers, TLBs, compaction equipment, rock breaking plant, water pumps, concrete mixers, ready mixed concrete trucks, batch plants, concrete pumps, compressors, pneumatic tools, generators, etc.
- Use on the site of power tools and hand tools.
- Handling of materials such as scaffolding, formwork, timber planks, steel wire, reinforcement, cement bags, concrete materials and hand stone.
- Storage and handling of flammable materials such as fuels, oils, adhesives, and painting and cleaning products.
- Storage and handling of herbicides and ant poisons.
- Risks related to general safety and security on site.
- Electrocution during commissioning.

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessarily covered in the above.

D.2 DEFINITIONS

For the purpose of this contract the following shall apply:

- a. **Employer** where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract 2015 and it shall have the exact same meaning as **client** as defined in the Construction Regulations 2014. **Employer** and **client** are therefore interchangeable and shall be read in the context of the relevant document.
- b. **Contractor** wherever used in the contract documents and in this specification, shall have the same meaning as **Contractor** as defined in the General Conditions of Contract 2015.

In this specification the terms **principal contractor** and **contractor** are replaced with **Contractor** and **subcontractor** respectively.

For the purpose of this contract the **Contractor** will, in terms of OHSA 1993, be the mandatory, without derogating from his status as an employer in his own right.

- c. **Employer's Agent** where used in this specification, means the Employer's Agent as defined in the General Conditions of Contract 2015. In terms of the Construction Regulations the Employer's Agent may act as agent on behalf of the Employer (the client as defined in the Construction Regulations).

D.3 TENDERS

This Health and Safety Specification forms an integral part of the Contract and Tenderers are required to use it during the tender phase for pricing the preparation of a project specific Health and Safety Plan prior to commencing any work and for pricing the costs of ensuring compliance thereto during construction. Tenderers must forward a copy of this Specification to all other persons or organisations that may be submitting prices to the Tenderer during the tender stage to enable them to include the cost

of preparing their own Health and Safety Plan, relevant to their particular operation, and for compliance with the health and safety requirements during construction. Payment items are included in the Schedule of Quantities for compliance with the Occupational Health and Safety Act and Construction Regulations and with this Specification.

Tenderers are required to complete the Contractor's Health and Safety Declaration' in section T2.2 'Returnable Schedules'.

Failure to submit the foregoing with his tender and/or to provide realistic rates for relevant payment items will lead to the conclusion that the Contractor will not be able to carry out the work under the contract safely and in accordance with the Act and Construction Regulations.

D.4 NOTIFICATION OF COMMENCEMENT OF CONSTRUCTION WORK

Where the contract meets the requirements of Construction Regulation 4, the Contractor shall, before commencement of the work and in accordance with the requirements of Regulation 4, notify the Provincial Director of the Department of Labour of the intention to carry out the construction work, using the pro forma form included as Annexure 2 to this Health and Safety Specification.

A copy of the notification form must be kept on site, available for inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees, representative trade unions and any other persons on the site. A copy of the notification form shall also be kept on the health and safety file, and a further copy shall be forwarded to the Employer for his records.

D.5 HEALTH AND SAFETY PLAN

Before commencement of any construction work, the Contractor shall prepare a project specific Health and Safety Plan complying with the requirements of Construction Regulation 7(1)(a) and this Health and Safety Specification.

The Health and Safety Plan must include a risk assessment performed and recorded in writing by a competent person as required in terms of Construction Regulation 9. The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards identified.

The Health and Safety Plan shall be available on site for inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees, representative trade unions, and health and safety representatives and committee members, and must be monitored and reviewed periodically by the Contractor.

D.6 APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

D6.1 Appointments

The Contractor shall appoint in writing all employees.

The Contractor shall appoint in writing all subcontractors, and such appointments shall be in compliance with the requirements of Construction Regulation 7.

D6.2 Health and safety induction training

No person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the site.

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo health and safety induction training by a competent person before commencement of construction work in compliance with Construction Regulations 7(5) and 9(3) and (4).

The Contractor shall ensure that all visitors to the construction site undergo health and safety induction and are provided with the necessary personal protective equipment in compliance with Construction Regulation 7(6).

D6.3 Medical certificate of fitness

The Contractor shall ensure that every employee, including subcontractors and their employees, has a valid medical certificate of fitness issued in compliance with Construction Regulation 7(1)(g) or 7(8) as applicable.

D.7 APPOINTMENT OF SAFETY PERSONNEL

D7.1 Construction manager

Refer to Construction Regulation 8(1), (2), (3) and (4).

The Contractor shall appoint a full-time **construction manager** with the duty of managing all the construction work on the site, including the duty of ensuring occupational health and safety compliance.

The Contractor may also have to appoint one or more **assistant construction managers** to assist the construction manager where justified by the scope and complexity of the works.

D7.2 Construction health and safety officer

Refer to Construction Regulation 8(5) and (6).

Taking into consideration the size of the project and the dangers, hazards or risks that can be expected, the Contractor shall appoint in writing a full-time or part-time **construction health and safety officer** to assist in the control of all health and safety related aspects on the site. The construction health and

safety officer shall be registered as required by the Chief Inspector of the Department of Labour and shall have the necessary competence and resources to perform his/her duties diligently.

D7.3 Construction supervisor

Refer to Construction Regulation 8(7), (8), (9) and (10).

The Contractor shall appoint a **construction supervisor** responsible for construction activities and ensuring occupational health and safety compliance on the construction site.

The Contractor may also have to appoint one or more competent employees to assist the construction supervisor where justified by the scope and complexity of the works.

D7.4 Health and safety representatives

In terms of **Sections 17 and 18 of the Act (OHSA 1993)** the Contractor, being the Employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 50 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery, etc. on a regular basis, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

D7.5 Health and safety committee

In terms of **Section 19 of the Act (OHSA 1993)**, the Contractor (as employer) shall establish one or more **health and safety committee(s)** where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, to make recommendations

regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

D7.6 Competent persons

The Contractor shall appoint in writing designated competent employees and/or other competent persons as required by the Act and Regulations. Such appointments shall be in accordance with the relevant applicable sections of the Act and Regulations as determined by the requirements of the contract.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work in all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities for compliance with **all** requirements of the Construction Regulations.

D.8 RECORDS AND REGISTERS

The Contractor is bound to keep records and registers related to health and safety on site as required by the relevant applicable sections of the Act and Regulations as determined by the requirements of the contract. Such records and registers shall be available for periodic inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees and representative trade unions.

D.9 CONTRACTOR'S RESPONSIBILITIES

For this contract the Contractor will be the mandatary of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2014.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) in terms of C1.4 'Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993', to confirm his status as mandatary (employer) for the contract under consideration.

The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations.

D.10 MEASUREMENT AND PAYMENT

It is a condition of this contract that contractors who submit tenders for this contract shall make provision in their various tendered rates and prices for all costs related to the health and safety measures required in terms of the Act and Regulations during the construction process.

a) Safety appointments

No separate additional payment will be made to cover the costs related to persons appointed as required in terms of the Act and Regulations to fulfil the various health and safety functions. Such persons include the construction manager, any assistant construction managers, the construction health and safety officer, the construction supervisor, any assistant construction supervisors, health and safety representatives, health and safety committee members and competent persons, all as referred to in subclauses D7.1 to D7.6 above.

The Contractor shall therefore make provision in the various tendered rates and prices for all costs related to such persons.

b) Records and registers

The keeping of records and registers related to health and safety on site as described in clause E8 above shall be regarded as a normal duty of the Contractor for which payment shall be deemed to be included in the Contractor's various tendered rates and prices, and for which no separate additional payment will be made except to the extent provided in item B13.02 of the Schedule of Quantities.

c) Medical certificates

No separate additional payment will be made to cover the costs related to obtaining the medical certificates of fitness required for every employee, including subcontractors and their employees, issued in compliance with Construction Regulation 7(1)(g) or 7(8) as applicable. The Contractor shall therefore make provision in the various tendered rates and prices for all costs related to such medical certificates.

PART E: SMALL CONTRACTOR DEVELOPMENT

E1001 SCOPE

This section covers construction aspects relating to the processes by which the construction industry develops emerging small contractors.

E1002 DEFINITIONS AND APPLICABLE LEGISLATION

a) Definitions

Unless inconsistent with the context, in these specifications the following terms, words or expressions shall have the meanings hereby assigned to them:

Contract Participation

Contract Participation in terms of this contract is a process by which the Employer implements Government's objectives by setting a target relating to small contractor development which the Contractor shall achieve as a minimum.

Contract Participation Goal (CPG)

Contract Participation Goal is the monetary value of the target set by the Employer in the Contract Participation process.

Contract Participation Performance (CPP)

Contract Participation Performance is the measure of the contractor's progress in achieving CPG.

Targeted Enterprise

A Targeted Enterprise is any company engaged by the Contractor as a subcontractor and which is registered with the Construction Industry Development Board (CIDB) in a grading ranging from 5EP and higher which is registered by the CIDB as a Potentially Emerging (PE).

b) Applicable Legislation

The following Acts, as amended from time to time, are predominant amongst those which apply to the construction industry and are listed here for reference purposes only:

- The Constitution of South Africa;
- Public Finance Management Act No.1 of 1999;
- Preferential Procurement Policy Framework Act No. 5 of 2000;
- Construction Industry Development Board Act No. 38 of 2000;
- Broad-Based Black Economic Empowerment Act No.5 of 2003.

E1002 CONTRACT PARTICIPATION

1. Objective

Governments objective for this contract in terms of broad-based black economic empowerment initiatives is to develop emerging small contractors that qualify as Targeted Enterprises as defined above.

2. Contract Participation Targets

Contract participation is the process by which the Employer implements Government's objectives.

The Employer sets a target for construction by specified entities, the rand value of which is based on the services and work undertaken by the specified entities and measured as a percentage of the Contractor's final certified value of work completed (excluding VAT) measured at the date of issue of the Certificate of completion. The contractor is obliged to commit to or exceed the target stated in section C1.2.2 Contract data, Part A: Data provided by the Employer.

3. Contract Participation Goal (CPG)

The CPG is the monetary value of the target set by the Employer and will be calculated as follows:

$$\text{CPG} = \text{final contract value (excluding VAT)} \times (\text{target \% set by the Employer for Targeted Enterprises}).$$

The final contract value is the total value of certified work measured at the date of issue of the Certificate of Completion.

4. Contract Participation Performance (CPP)

The CPP is the monetary value of the Contractor's actual progress toward achievement of the CPG calculated as follows:

$$\text{CPP} = \text{total value (excluding VAT) of contribution by Targeted Enterprises}$$

The Contractor's Contract Participation Performance will be measured monthly in order to monitor the extent to which he is striving to reach the CPG. The basis of monitoring shall be the levels of the individual contributions for Targeted Enterprises. Monthly returns, in a format approved by the Employer, are required from the Contractor and shall be submitted with each interim payment certificate.

To assist in the measurement of CPP, the Contractor shall include in his contract programme details of how he will achieve CPG. The detail shall be provided not later than one month after the Employer's Agent has accepted the original construction programme and shall be updated with every subsequent revision of the programme.

In the event that the Contractor fails to achieve the Contract Participation Goal (CPG) and fails to provide reasons which may be acceptable to the Employer, the Contractor shall be liable for a penalty as prescribed in classes SCC 4.1.1 of section C1.2.1.2 Special Conditions of Contract. The penalty shall be calculated as follows:

Penalty = 10% of the monetary value by which the achieved monetary value (CPP) falls short of the target monetary value (CPG)

Penalty = 10% of (CPG – CPP)

The penalty shall be applied on a pro rata basis according to a monthly evaluation of achievements against the programmed utilisation.

5. Accredited Registration

CPP for Targeted Enterprises shall only be accepted if the respective Targeted Enterprises for which services or work is being claimed as having been performed are registered with the CIDB in one of the defined categories. In addition, documentary evidence that such Targeted Enterprise are registered with the South African Revenue Services (SARS) shall be lodged with the Employer's Agent before the work or service may be considered as having been performed by a Target Enterprise. The responsibility for producing evidence of such registration documentation shall rest with the Contractor.

6. Record Keeping

The Contractor shall assume responsibility for the compilation and maintenance of comprehensive records detailing each Targeted Enterprise's progress during construction, starting from the award of a subcontract to a Target Enterprise until the successful completion of the subcontract work or termination of the subcontract.

PART 3: SITE INFORMATION

LOCALITY MAP

General

The Greater Tzaneen Local Municipality is a Category B municipality situated in the eastern quadrant of the Limpopo Province within the Mopani District. It is bordered by Greater Letaba to the north, Lepelle-Nkumpi to the south, Ba-Phalaborwa and Maruleng to the east, and Polokwane to the west. It is one of the five municipalities in the district. It contains 125 rural villages, with almost 80% of households residing in these villages.

Climatic Conditions

Mostly sunshine, long summer days with pleasant winters. Tzaneen's subtropical conditions provide more suited weather for dense forests (high summer rainfall) than the thorny bushveld above the escarpment and further to the east.

The summer months, September – March, have an average temperature of 28 °C (82 °F) and winter months around 15 °C (59 °F). Rainfall averages from around 800 mm per year in town to over 1500 mm per year in the mountains.



Figure 17: Locality Map

EXAMPLE OF CONTRACT SIGNBOARD DETAILS

A project notice board, constructed in accordance with the details provided, is to be provided by the Contractor as part of the contract and erected in the position indicated by the Employer's Agent on site. The wording shall be approved prior to sign writing. The board shall remain in place until the end of the defects liability period at which time it shall be removed by the Contractor.

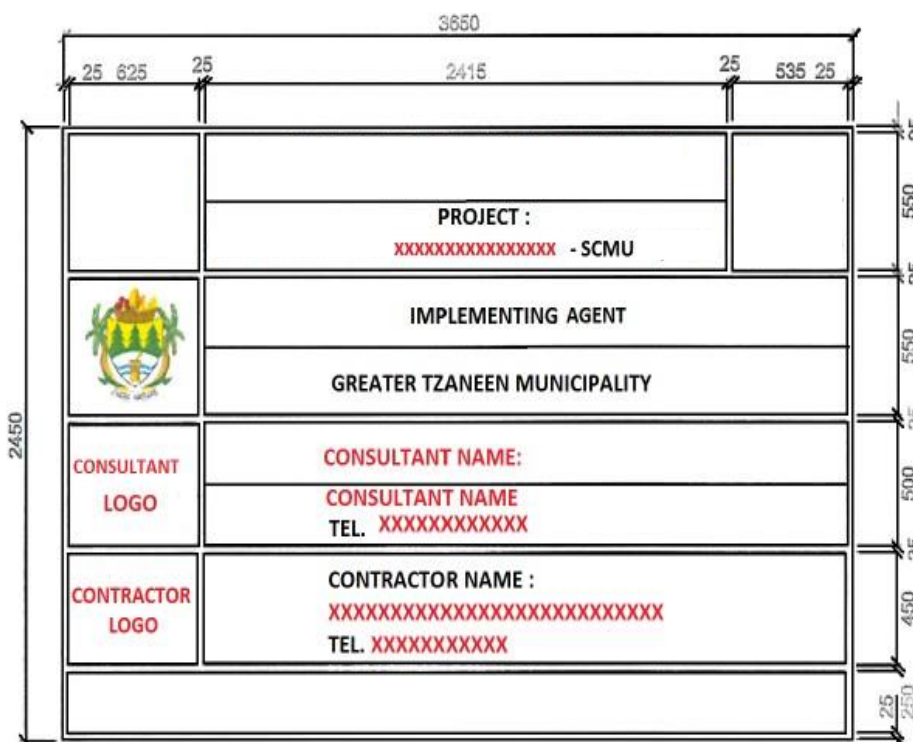


Figure 18: Example of Contract Signboard

Evaluation Criteria		Scoring System A - Tender Rating (score 1 to 5)		B - Weighing	Tenderer Score	
A	Company Experience Note: Attach Appointment letters, Completion certificates and recommendation or reference letters in relation to the field signed and stamped by the institution. The following information must be contained in the appointment letter: e) Description f) Value g) Actual Construction period					
	1.	Company/ Entity’s work experience in SCADA Projects	3 SCADA Projects in the last 5 Years			5
			2 SCADA Projects in the last 5 Years			3
			1 SCADA Projects in the last 5 Years			1

Evaluation Criteria		Scoring System A - Tender Rating (score 1 to 5)		B - Weighing	Tenderer Score
		0 SCADA Projects in the last 5 Years	0		
2.	Key Personnel Names of various employees occupying the positions must be stated; CV's, certified ID copies, and certified copies of qualifications must be attached in order to qualify for points and must appear on company organogram.	2.1 Project Manager		10%	
		Project Manager – Pr.Eng. or Pr. Tech Electrical and SACPCMP with at least 5 years' experience	5		
		Project Manager – Pr.Eng. or Pr. Tech Electrical and SACPCMP with at least 3 years' experience	3		
		Project Manager – Pr.Eng. or Pr. Tech Electrical and SACPCMP with 1-3 years' experience	1		
		Project Manager – Pr.Eng. or Pr. Tech Electrical and SACPCMP with less than 1 years' experience	0		
		2.2 SCADA Engineer		10%	
		Lead Engineer – Pr.Eng. or Pr. Tech Electrical or Software with at least 5 years' experience	5		
		Lead Engineer – Pr.Eng. or Pr. Tech Electrical or Software with at least 3 years' experience	3		
		Lead Engineer – Pr.Eng. or Pr. Tech Electrical or Software with 1-3 years' experience	1		
		Lead Engineer – Pr.Eng. or Pr. Tech Electrical or Software with less than 1 years' experience	0		
		2.3 SCADA Commissioning Technician		10%	
		Pr. Techni Electrical with at least 5 years' experience	5		
		Pr. Techni Electrical with at least 3 years' experience	3		
		Pr. Techni Electrical with at least 2 years' experience	1		
		No Pr. Techni Electrical	0		

Evaluation Criteria		Scoring System A - Tender Rating (score 1 to 5)		B - Weighing	Tenderer Score
3.	SCADA Certification	SCADA Certificate	5	10%	
		No SCADA Certificate	0		
4.	Proof of Plant & Equipment for electrification projects	Light delivery vehicle (LDV) fully owned (eNatis certificate)	5	10%	
		Lease LDV; (letter of intent to hire from the lessor [owner]) (eNatis certificate)	3		
		No proof of plant	0		
5.	Technical Proposal on SCADA Implementation Projects (See Technical Proposal Guideline below)	Good The approach plan or methodology is specific and tailored to address the specific project objectives and covers in full all of the elements	5	20%	
		Acceptable The approach plan or methodology is generic and not tailored to address the specific project objectives	3		
		Poor The approach plan or methodology is poor and not tailored to address the specific project objectives	0		
Full proof of ownership must be provided that the equipment is owned by your company or director, or a letter of intent for leased equipment. (eNatis certificate) Verification of vehicle ownership will still be conducted internally					
TOTAL EVALUATION POINTS SCORE FOR QUALITY, TENDERERS WITH A SCORE OF LESS THAN 70% WILL BE REJECTED AS NON-RESPONSIVE				100%	

TECHNICAL PROPOSAL GUIDELINE

Proposals need to clearly state the following information:

1. Introduction.
2. Background of the company/tenderer, specifically related to SCADA Implementation
3. Understanding aim of the initiative.
4. Understanding the objective of the initiative.
5. Understanding of the prescribed scope of work.
6. Detailed analysis of the prescribed of scope of work.
7. Stakeholder management (stakeholder identification and reporting requirements).
8. Risk management (implementation risk and risk management).
9. Quality Management
10. Approach and methodology – responding to the scope of work.
 - 10.1. Initiation and inception.
 - 10.2. Implementation and delivery.
 - 10.2.1. Investigations.
 - 10.2.2. Consultations.
 - 10.2.3. Interventions.
 - 10.2.4. Professionalism.
 - 10.2.5. Reporting (progress).
 - 10.2.6. Reports endorsements.
11. Proposed implementation program, in GANTT Chart format, showing dependencies.
12. Proposed lead times per task.
13. Project cost and alternative financial proposal (if applies).
14. Previous contracts terminations and existing litigations.
15. Company management

EVALUATION OF BIDS

N.B: The evaluation of bid will be conducted in two stages. First stage it be the assessment of functionality, there after **only bidders that obtain 70 points will be evaluated in terms of 80/20** Preference point scoring system, where 80 points will be allocated for price only and 20 specific goals points scored.

The specific goals allocated points in terms of this tender	Number of points Allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)	Means of verification (MOV) for specific goals	
Black People	20		CK, CSD report and Certified Identification documentation	Tick
TOTAL	20			

PART G: MBD 2 TAX CLEARANCE CERTIFICATE REQUIREMENTS

It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet

THE BIDDER'S TAX OBLIGATIONS

- (a) In order to meet the requirements, bidders are required to complete in full the attached form TCC 00. "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.
- (b) SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.
- (c) The original Tax Clearance Certificate must be submitted together with the bid. Failure to submit the original and valid Tax Clearance Certificate will result in the invalidation of the bid. Certified copies of the Tax Clearance Certificate will not be acceptable.
- (d) In bids where Consortia / Joint Ventures / Sub-contractors are involved; each party must submit a separate Tax Clearance Certificate.
- (e) Copies of the TCC 001 "Application for a Tax Clearance Certificate" form is available from any SARS branch office nationally or on the website www.sars.gov.za.
- (f) Applications for the Tax Clearance Certificates may also be made via e-filing. In order to use this provision, taxpayers will need to register with SARS as e-filers through the website www.sars.gov.za.

PART H: MBD 4 DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state*.
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 Full Name:.....

3.2 Identity Number:

3.3 Company Registration Number:

3.4 Tax Reference Number:

3.5 VAT Registration Number:

3.6 Are you presently in the service of the state* **(please circle the applicable one)** *YES /NO

3.6.1 If yes, furnish particulars:

3.7 Have you been in the service of the state for the past twelve months? **(Please circle the applicable one)** *YES / NO

i. If yes, furnish particulars:
.....

3.8 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? (Please circle the **applicable one**) *YES / NO

3.8.1 If yes, furnish particulars:

3.9 Have you been in the service of the state for the past twelve months? **(Please circle the applicable one)** *YES / NO

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

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

3.9.1. If yes, furnish particulars.....

3.10. Are you, aware of any relationship (family, friend, other) between a bidder and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.10.1. If yes, furnish particulars.....

3.11 Are any of the company's directors, managers, principal shareholders or stakeholders in service of the state? **(Please circle the applicable one) *YES / NO**

3.11.1 If yes, furnish particulars.....

3.12 Are any spouse, child or parent of the company's directors, managers, principal shareholders or stakeholders in service of the state? **(Please circle the applicable one) *YES / NO**

3.12.1 If yes, furnish particulars.....

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

Full Name	Identity Number	State Employee Number

Signature

Date

Capacity

Name of Bidder

CERTIFICATION

I, the undersigned (name).....

Certify that the information furnished on this declaration form is correct. I accept that the state may act against me should this declaration prove to be false.

Signature

Date

Designation

Name of Bidder

PART I: MBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

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

1.2. To be completed by the organ of state

- The applicable preference point system for this tender is the 80/20 preference point system.

1.3. Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- Price; and
- Specific Goals.

1.4. To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

1.5. Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6. The organ of state 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 to preferences, in any manner required by the organ of state.

2. 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 an organ of state 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 organ of state and a third party that produces revenue for the organ of state, 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; and
- 2.5. “the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1.THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

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

9. 80/20

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

Or

10. 90/10

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

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

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

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

11. 80/20

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

Or

12. 90/10

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

Where:

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{max} = Price of lowest acceptable tender

4 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 goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this 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.

Specific goals for the tender and points claimed are indicated per the table below.

(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)	Means of verification (MOV) for specific goals	
Black People	20		CK, CSD report and Certified Identification documentation	Tick
TOTAL	20			

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3 Name of company/firm.....

4.4 Company registration number:

4.5 TYPE OF COMPANY/ FIRM

<input type="checkbox"/>	Partnership/Joint Venture / Consortium
<input type="checkbox"/>	One-person business/sole propriety
<input type="checkbox"/>	Close corporation
<input type="checkbox"/>	Public Company
<input type="checkbox"/>	Personal Liability Company
<input type="checkbox"/>	(Pty) Limited
<input type="checkbox"/>	Non-Profit Company
<input type="checkbox"/>	State Owned Company

[TICK APPLICABLE BOX]

4.6 I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- The information furnished is true and correct;
- The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- 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;
- 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 –
 - disqualify the person from the tendering process;
 - recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - 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;
 - 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
 - forward the matter for criminal prosecution, if deemed necessary.

SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:

PART J: MBD 5 DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (VAT INCLUDED)

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

No.	Declaration	Tenderers are to circle applicable	
1.0	Are you by law required to prepare annual financial statements for auditing?	YES	NO
1.1	If YES, you will be required to submit audited annual financial statements (on request during the tender evaluation period) for the past three years or since the date of establishment if established during the past three years.		
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 on a letterhead. (Attach this letter to the back inside cover of this document).		
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 on a letterhead. (Attach this letter to the back inside cover of this document).		
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 on a letterhead. (Attach this letter to the back inside cover of this document).		

I, the undersigned,**certify that the information furnished on this declaration form is correct. I accept that the state may act against me should this declaration prove to be false.**

Signature.....

Date.....

Position.....

Name Of Bidder.....

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

PART K: MBD 7.2 CONTRACT FORM - RENDERING OF SERVICES

PART 2 (TO BE FILLED IN BY THE PURCHASER)

- 1 Iin my capacity
as..... accept your bid under reference number
.....dated.....for the rendering of services indicated hereunder and/or
further specified in the annexure(s).
- 2 An official order indicating service delivery instructions is forthcoming.
- 3 I undertake to make payment for the services rendered in accordance with the terms and conditions of
the contract, within 30 (thirty) days after receipt of an invoice.

Description of Service	Price (all applicable taxes included)	Completion date	Minimum threshold for local production and content (if applicable)

4. I confirm that I am duly authorized to sign this contract.

Signed at on

Name (print)

Signature

OFFICIAL STAMP

WITNESSES

1
...

2

PART L: MBD 8 DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

Item	Question	Yes	No
4.1	<p>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?</p> <p>(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 <i>audi alteram partem</i> rule was applied).</p> <p>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.</p>	<p>Yes</p> <input type="checkbox"/>	<p>No</p> <input type="checkbox"/>
4.1.1	If yes, furnish particulars:		
4.2	<p>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)?</p> <p>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.</p>	<p>Yes</p> <input type="checkbox"/>	<p>No</p> <input type="checkbox"/>

Item	Question	Yes	No
4.2.1	If yes, furnish particulars:		
4.3	Was the bidder or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3.1	If yes, furnish particulars:		
4.4	Does the bidder or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.4.1	If yes, furnish particulars:		
4.5	Was any contract between the bidder and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.7.1	If yes, furnish particulars:		

CERTIFICATION

I, the undersigned (name).....

Certify that the information furnished on this declaration form is true and correct. Accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

Signature

Date

Designation

Name of Bidder

PART M: MBD 9 CERTIFICATE OF INDEPENDENT BID DETERMINATION

- a. This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- b. 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 per se prohibition meaning that it cannot be justified under any grounds.
- c. 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:
 - take all reasonable steps to prevent such abuse;
 - 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
 - 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.
- d. 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.
- e. In order to give effect to the above, the attached Certificate of Bid Determination (MBD 9) must be completed and submitted with the bid:

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.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid number:

Bid Description:

In response to the invitation for the bid made by **Greater Tzaneen Municipality**

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:

- a. I have read and I understand the contents of this Certificate.
- b. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect.
- c. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder.
- d. 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.
- e. For the purposes of this Certificate and the accompanying bid, I understand that the word “competitor” shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:
 - a. Has been requested to submit a bid in response to this bid invitation.
 - b. Could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities, or experience; and
 - c. Provides the same goods and services as the bidder and/or is in the same line of business as the bidder
- f. 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.

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.

g. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:

- Prices.
- Geographical area where product or service will be rendered (market allocation)
- Methods, factors or formulas used to calculate prices.
- The intention or decision to submit or not to submit, a bid.
- The submission of a bid which does not meet the specifications and conditions of the bid; or
- Bidding with the intention not to win the bid.

h. 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.

i. 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.

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

Signature

Date

Designation

Name of Bidder

PART N: RETURNABLE DOCUMENTS

Checklist On Minimum Requirements

To assist you with your tendering process, see a checklist on minimum requirements below:

No.	Minimum requirements	Tick	Comment if not attached
1.	Complete original bid document		
2.	Compulsory briefing session		
3.	Proof of payment for tender document, Proof of payment for tender document, including downloaded tender documents (attach receipt) EFT or Manually		
4.	Valid Tax Clearance Certificate or Tax pin		
5.	Latest CSD registration summary report		
6.	CK/Company registration certificate showing percentage of shareholders / membership interest		
7.	Certified ID copies of the shareholders appearing in the CK		
8.	Municipal rates and taxes for both company and directors appearing in CK (not older than 3 months)) if the statement of water and lights is not on your names, please attach affidavit commissioned by oath from SAPS supporting your residential addresses as per attached statement or copy of Lease Agreement with 3 Months proof of payment only (No statements); Certified copies of Permission to Occupy (PTO's) land for bidders residing in Tribal Authority's areas of jurisdiction; proof of residence from Traditional Authority		
9.	CIDB Grading 6EP or Higher		
10.	Bidders work experience appointment letters and completion certificates in relation to the projects signed and stamped by respective institutions		
11.	Proof of Plant and Equipment		
12.	Key personnel and Qualifications		
13.	ECSA Professional Registration (Pr. Eng and/or Pr. Tech Electrical or Software) and SACPCMP		
14.	Company's Audited 3 years Annual Financial Statements signed off by a Professional Accountant/Registered Auditor with a practice number		
15.	Contract period: 36 Months (Risk based)		
16.	In case of a Joint Venture, Association or Consortium a formal contract agreement signed by both parties		
17.	Responded as per the scope of work (compliance to specification/ conditions or term of references)		

Signature


Date


Designation

Company Representative (Name)

A Green, Healthy, Prosperous and United Municipality that Provides Quality Services to All
For the POPI Act, the information in this document should be used for the intended purpose and the protection of personal information. Any other use, reproduction, or distribution is strictly prohibited

ANNEXURE A: BILL OF QUANTITIES

<p style="text-align: center;">SCHEDULE OF QUANTITIES GTM SCADA SYSTEM</p> 		
SUMMARY OF TOTALS		
SECTION	DESCRIPTION	AMOUNT
1	PRELIMINARY AND GENERAL CHARGES	R
2	PACKAGE 1: SCADA INSTALLATION	R
3	PACKAGE 2: OPTIC FIBRE WORKS	R
4	PACAKGE 3: OUTDOOR POLE MOUNTED BREAKER TELEMETRY	R
5	PACAKGE 4: CONTROL ROOM REPAIRS	R
6	SUB TOTAL A	R
7	CONTINGENCIES (10% OF SUB-TOTAL A)	R
8	CONTRACT PRICE ADJUSTMENT (10% OF SUB-TOTAL A)	R
9	SUB TOTAL B	R
10	VAT	R
GRAND TOTAL (TO FORM OF OFFER)		R

<p style="text-align: center;">SCHEDULE OF QUANTITIES P & G ITEMS</p> 									
SECTION 1: PRELIMINARY AND GENERAL CHARGES									
Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
1.1	FIXED CHARGE ITEMS Allow for complying with all General and Special Conditions of Contract, labour requirements, insurance's and statutory contributions.								
1.1.1		sum	1						
1.1.2	Allow for attendance to all site meetings and inspections, transport and time, related to such meetings and inspections.	sum			1				
1.2	TIME RELATED ITEMS Allow for Any Time Related Charges During Implementation								
1.2.1		Months			9				
1.3	OTHER ITEMS (Specify) Allow for all Other Items Necessary for Completion of the Project								
1.3.1		Sum	1						
TOTAL SECTION 1: (To be Carried Forward to Summary of Totals)									

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
1	Tzaneen Main Control room								
1.1	Material								
1.1.1	8-core outdoor OM3 Multimode fiber optic cable	m	300						
1.1.2	50mm corrugated PVC ducting	50m	4						
1.1.3	50mm PVC corrugated ducting coupling	Each	16						
1.1.4	PVC Man Hole – Medium (0.62 x 0.50 x 0.50m)	Each	3						
1.1.5	Fibre optic warning tape 150mm x 365m	Each	1						
1.1.6	50mm Black Rotating Corrugated Flex Pipe Coupling	Each	12						
1.1.7	50mmx50mm Trench Covers	Each	10						
1.1.8	Installation Accessories	Sum	1						
1.1.9	Industrial computer/Data Server	Each	1						
1.1.10	Server Cabinet panel wiring and accessories	lot	1						
1.2	Labour								
1.2.1	Excavate 400mm (Wide) x 500mm Deep trench from Substation to Control room	m			200				
1.2.2	Install 3 x PVC manholes	Each			4				
1.2.3	Prepare sand bedding for the corrugated ducting	m			200				

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
1.2.4	Lay corrugated PVC ducting in the excavated trench	Each			1				
1.2.5	Backfill trench and lay warning tape and complete backfilling	m			200				
1.2.6	Cutt out a 50mmx50mm cable trench in the control room and prepare for closing using covers	m			5				
1.2.7	Install the 42U server cabinet in the control room	Each			1				
1.2.8	Install 8-core outdoor fibre optic cable in the ducting	Each			200				
1.2.9	Splice and test fibre optic cable at the control room and substation	Each			16				
1.2.10	Power up and test the SCADA server, clients and inverter power backup system	Sum			1				
2	Tzaneen Main Sub_Station								
2.1	Material								
2.1.1	Siemens PAC 1020 Energy meter	Each	2						
2.1.2	DNP3 Protocol, 751A DNP3 software update	Each	4						
2.1.3	SEL-2886 EIA-232 to EIA-485 Interface Converter	Each	4						
2.1.4	Omron G2RV-ST Series Electromechanical Interface Relay, DIN Rail Mount, 110V ac Coil, SPDT, 1-Pole, 6A Load	Each	600						

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
2.1.5	Black 1.5mm ² Flexible Panel Wire	100m	6						
2.1.6	Grey 1.5mm ² Flexible Panel Wire	100m	8						
2.1.7	Red 1.5mm ² Flexible Panel Wire	100m	6						
2.1.8	DMLS/Modbus RTU Gateway	Each	1						
2.1.9	CU-P42 Communication board	Each	19						
2.1.10	Belden RS485 Industrial Shielded Cable	m	150						
2.1.11	24-Core 1.5mm ² numbered SWA control cable	m	800						
2.1.12	36-Core 1.5mm ² numbered SWA control cable	m	200						
2.1.13	3-core 1.5mm ² SWA Power cable	m	20						
2.1.14	Size 3 BWR Glands and shrouds	Each	46						
2.1.15	Size 4 BWR Glands and shrouds	Each	22						
2.1.16	Size 0 BWR Glands and shrouds	Each	6						
2.1.17	Size 00 Compression gland and shrouds	Each	10						
2.1.18	Installation Accessories	Sum	1						
2.2	Labour								
2.2.1	Install Interposing relays in protection panel and wire RTU Input signals	Each			30				
2.2.2	Install panel mount PAC1020 energy	Each			2				

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
	meter and terminate VT and CT signals								
2.2.3	Pull multicore Signal cable from protection panel to RTU panel	Each			30				
2.2.4	Gland and terminate signal cable at RTU and protection panels	Each			30				
2.2.5	Install RS485 network cable for Modbus and DMLS networks and terminate at energy meters and DMLS/Modbus Gateway	Each			1				
2.2.6	Carry out loop tests to RTU panel	Each			30				
2.2.7	Configure and test DMLS and Modbus RTU networks	Each			1				
2.2.8	Commission protection panel SCADA with secondary Injection testing	Each			30				
2.2.9	As built Documentation	Each			1				
3	Tarentaalrand Sub_Station								
3.1	Material								
3.1.1	Siemens PAC 1020 Energy meter	Each	5						
3.1.2	Omron G2RV-ST Series Electromechanical Interface Relay, DIN Rail Mount, 110V ac Coil, SPDT, 1-Pole, 6A Load	Each	312						

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
3.1.3	Black 1.5mm ² Flexible Panel Wire	100m	3						
3.1.4	Grey 1.5mm ² Flexible Panel Wire	100m	4						
3.1.5	Red 1.5mm ² Flexible Panel Wire	100m	3						
3.1.6	DMLS/Modbus RTU Gateway	Each	1						
3.1.7	Belden RS485 Industrial Shielded Cable	m	30						
3.1.8	12-Core 1.5mm ² numbered SWA control cable	m	80						
3.1.9	24-Core 1.5mm ² numbered SWA control cable	m	80						
3.1.10	36-Core 1.5mm ² numbered SWA control cable	m	140						
3.1.11	3-core 1.5mm ² SWA Power cable	m	10						
3.1.12	Size 2 BWR Glands and shrouds	Each	10						
3.1.13	Size 3 BWR Glands and shrouds	Each	10						
3.1.14	Size 4 BWR Glands and shrouds	Each	16						
3.1.15	Size 0 BWR Glands and shrouds	Each	4						
3.1.16	Size 00 Compression gland and shrouds	Each	6						
3.2	Labour								
3.2.1	Install Interposing relays in protection panel and wire RTU Input signals	Each			12				
3.2.2	Install panel mount PAC1020 energy	Each			5				

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
	meter and terminate VT and CT signals								
3.2.3	Pull multicore Signal cable from protection panel to RTU panel	Each			12				
3.2.4	Gland and terminate signal cable at RTU and protection panels	Each			12				
3.2.5	Install RS485 network cable for Modbus and DMLS networks and terminate at energy meters and DMLS/Modbus Gateway	Each			1				
3.2.6	Carry out loop tests to RTU panel	Each			12				
3.2.7	Configure and test DMLS and Modbus RTU networks	Each			1				
3.2.8	Commission protection panel SCADA with secondary Injection testing	Each			12				
3.2.9	As built Documentation	Each			1				
4	Letsitele Sub-station								
4.1	Material								
4.1.1	Siemens PAC 1020 Energy meter	Each	2						
4.1.2	Omron G2RV-ST Series Electromechanical Interface Relay, DIN Rail Mount, 110V ac Coil, SPDT, 1-Pole, 6A Load	Each	150						

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
4.1.3	Black 1.5mm ² Flexible Panel Wire	100m	2						
4.1.4	Grey 1.5mm ² Flexible Panel Wire	100m	3						
4.1.5	Red 1.5mm ² Flexible Panel Wire	100m	2						
4.1.6	DMLS/Modbus RTU Gateway	Each	1						
4.1.7	Belden RS485 Industrial Shielded Cable	m	30						
4.1.8	12-Core 1.5mm ² numbered SWA control cable	m	80						
4.1.9	24-Core 1.5mm ² numbered SWA control cable	m	30						
4.1.10	36-Core 1.5mm ² numbered SWA control cable	m	60						
4.1.11	3-core 1.5mm ² SWA Power cable	m	10						
4.1.12	Size 2 BWR Glands and shrouds	Each	12						
4.1.13	Size 3 BWR Glands and shrouds	Each	6						
4.1.14	Size 4 BWR Glands and shrouds	Each	10						
4.1.15	Size 0 BWR Glands and shrouds	Each	4						
4.1.16	Size 00 Compression gland and shrouds	Each	6						
4.2	Labour								
4.2.1	Install Interposing relays in protection panel and wire RTU Input signals	Each			7				
4.2.2	Install panel mount PAC1020 energy	Each			2				

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
	meter and terminate VT and CT signals								
4.2.3	Pull multicore Signal cable from protection panel to RTU panel	Each			7				
4.2.4	Gland and terminate signal cable at RTU and protection panels	Each			7				
4.2.5	Install RS485 network cable for Modbus and DMLS networks and terminate at energy meters and DMLS/Modbus Gateway	Each			1				
4.2.6	Carry out loop tests to RTU panel	Each			7				
4.2.7	Configure and test DMLS and Modbus RTU networks	Each			1				
4.2.8	Commission protection panel SCADA with secondary Injection testing	Each			7				
4.2.9	As built Documentation	Each			1				
5	Old SAR: Sub-station								
5.1	Material								
5.1.1	DNP3 Protocol, 751A DNP3 software update	Each	12						
5.1.2	SEL-2886 EIA-232 to EIA-485 Interface Converter	Each	12						
5.1.3	Belden RS485 Industrial Shielded Cable	m	50						
5.1.4	3-core 1.5mm ² SWA Power cable	m	10						

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
5.1.5	Size 00 Compression gland and shrouds	Each	20						
5.1.6	Accessories	Sum	1						
5.2	Labour								
5.2.1	Install RS485 network cable for DNP3 network and terminate at Protection relays	Each			1				
5.2.2	Configure and test DNP3 network communication	Sum			1				
5.2.3	Commission protection panel SCADA with secondary Injection testing	Each			16				
6	SS1: Substation								
6.1	Material								
6.1.1	DNP3 Protocol, 751A DNP3 software update	Each	10						
6.1.2	SEL-2886 EIA-232 to EIA-485 Interface Converter	Each	10						
6.1.3	Belden RS485 Industrial Shielded Cable	m	40						
6.1.4	3-core 1.5mm ² SWA Power cable	m	20						
6.1.5	Size 00 Compression gland and shrouds	Each	10						
6.1.6	Accessories	Sum	1						

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
6.2	Labour								
6.2.1	Install RS485 network cable for DNP3 network and terminate at Protection relays	Each			1				
6.2.2	Configure and test DNP3 network communication	Sum			1				
6.2.3	Commission protection panel SCADA with secondary Injection testing	Each			10				
7	New Western								
7.1	Material								
7.1.1	DNP3 Protocol, 751A DNP3 software update	Each	11						
7.1.2	SEL-2886 EIA-232 to EIA-485 Interface Converter	Each	11						
7.1.3	Belden RS485 Industrial Shielded Cable	m	50						
7.1.4	3-core 1.5mm ² SWA Power cable	m	20						
7.1.5	Size 00 Compression gland and shrouds	Each	10						
7.1.6	Accessories	Sum	1						
7.2	Labour								
7.2.1	Install RS485 network cable for DNP3 network and terminate at Protection relays	Each			1				

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
7.2.2	Configure and test DNP3 network communication	Sum			1				
7.2.3	Commission protection panel SCADA with secondary Injection testing	Each			11				
8	Adam Circle								
78.1	Material								
8.1.1	DNP3 Protocol, 751A DNP3 software update	Each	13						
8.1.2	SEL-2886 EIA-232 to EIA-485 Interface Converter	Each	13						
8.1.3	Belden RS485 Industrial Shielded Cable	m	50						
8.1.4	3-core 1.5mm ² SWA Power cable	m	20						
8.1.5	Size 00 Compression gland and shrouds	Each	10						
8.1.6	Accessories	Sum	1						
8.2	Labour								
8.2.1	Install RS485 network cable for DNP3 network and terminate at Protection relays	Each			1				
8.2.2	Configure and test DNP3 network communication	Sum			1				
8.2.3	Commission protection panel SCADA with secondary Injection testing	Each			17				

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
9	Church								
9.1	Material								
9.1.1	DNP3 Protocol, 751A DNP3 software update	Each	11						
9.1.2	SEL-2886 EIA-232 to EIA-485 Interface Converter	Each	11						
9.1.3	Belden RS485 Industrial Shielded Cable	m	50						
9.1.4	3-core 1.5mm ² SWA Power cable	m	20						
9.1.5	Size 00 Compression gland and shrouds	Each	10						
9.1.6	Accessories	Sum	1						
9.2	Labour								
9.2.1	Install RS485 network cable for DNP3 network and terminate at Protection relays	Each			1				
9.2.2	Configure and test DNP3 network communication	Sum			1				
9.2.3	Commission protection panel SCADA with secondary Injection testing	Each			15				
10	Prison Substation								
10.1	Material								

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
10.1.1	DNP3 Protocol, 751A DNP3 software update	Each	6						
10.1.2	SEL-2886 EIA-232 to EIA-485 Interface Converter	Each	6						
10.1.3	Belden RS485 Industrial Shielded Cable	m	50						
10.1.4	3-core 1.5mm ² SWA Power cable	m	20						
10.1.5	Size 00 Compression gland and shrouds	Each	10						
10.1.6	Accessories	Sum	1						
10.2	Labour								
10.2.1	Install RS485 network cable for DNP3 network and terminate at Protection relays	Each			1				
10.2.2	Configure and test DNP3 network communication	Sum			1				
10.2.3	Commission protection panel SCADA with secondary Injection testing	Each			10				
11	Rubbervale Sub-station								
11.1	Material								
11.1.1	Serial optic/RS232 Converters	Each	2						
11.1.2	Black 1.5mm ² Flexible Panel Wire	100m	1						
11.1.3	Grey 1.5mm ² Flexible Panel Wire	100m	1						

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
11.1.4	Red 1.5mm ² Flexible Panel Wire	100m	1						
11.1.5	12-Core 1.5mm ² numbered SWA control cable	m	15						
11.1.6	36-Core 1.5mm ² numbered SWA control cable	m	15						
11.1.7	Size 2 BWR Glands and shrouds	Each	2						
11.1.8	Size 4 BWR Glands and shrouds	Each	2						
11.1.9	Size 0 BWR Glands and shrouds	Each	4						
11.1.10	Belden RS485 Industrial Shielded Cable	m	10						
11.1.11	3-core 1.5mm ² SWA Power cable	m	10						
11.1.12	Size 00 Compression gland and shrouds	Each	6						
11.1.13	Accessories	Sum	1						
11.2	Labour								
11.2.1	Install Interposing relays in protection panel and wire RTU Input signals	Each			1				
11.2.2	Pull multicore Signal cable from protection panel to RTU panel	Each			1				
11.2.3	Install RS485 network cable for Modbus network and terminate at Protection relays	Each			1				
11.2.4	Gland and terminate signal cable at RTU and protection panels	Each			1				

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
11.2.5	Carry out loop tests to RTU panel	Each			1				
11.2.6	Configure and test Modbus RTU networks	Each			1				
11.2.7	Commission protection panel SCADA with secondary Injection testing	Each			1				
11.2.8	As built Documentation	Each			1				
12	Tarrentaal T-off Sub-station								
12.1	Material								
12.1.1	50mm corrugated PVC ducting	50m	2						
12.1.2	50mm PVC corrugated ducting coupling	Each	6						
12.1.3	PVC Man Hole – Medium (0.62 x 0.50 x 0.50m)	Each	2						
12.1.4	Fibre optic warning tape 150mm x 365m	Each	120						
12.1.5	50mm Black Rotating Corrugated Flex Pipe Coupling	Each	2						
12.1.7	Installation Accessories	Sum	1						
12.1.5	Size 00 Compression gland and shrouds	Each	8						
12.1.6	Accessories	Sum	1						
12.2	Labour								

SCHEDULE OF QUANTITIES

PACKAGE 1: INSTALLATION OF SUBSTATION SCADA AUTOMATION EQUIPMENT



SECTION 2: SCADA EQUIPMENT INSTALLTION AND COMMISIONING

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
12.2.1	Excavate 400mm (Wide) x 500mm Deep trench from Substation to Control room	m			120				
12.2.2	Install 2 x PVC manholes	Each			2				
12.2.3	Prepare sand bedding for the corrugated ducting	m			120				
12.2.4	Lay corrugated PVC ducting in the excavated trench	Each			1				
12.2.5	Backfill trench and lay warning tape and complete backfilling	m			120				
12.2.6	Install the auto-reclosers junction box	Each			1				
12.2.7	Install outdoor cate 5e cable in the ducting	Each			200				
12.2.8	Power up and test the SCADA server, clients and inverter power backup system	Sum			1				
12.2.9	Commission protection panel SCADA with secondary Injection testing	Sum			1				
12.2.10	Alarm Annunciators	Each	9		9				
TOTAL SECTION 2: (To be Carried Forward to Summary of Totals)									

**SCHEDULE OF QUANTITIES
PACKAGE 2: OPTIC FIBRE WORKS**



SECTION 3: OPTIC FIBRE WORKS

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
1	Testing of Existing Optic Fibre and Fault Finding								
1.1	Physical Inspection of Optic Fibre Route (Manhole to Manhole)	Sum	1		1				
1.2	Point to Point Testing of Optic Fibre Cables with TDR Testing Equipment and provide detailed Report	Sum	1		1				
2	Supply and Install Optic Fibre Equipment								
2.1	ST Fiber Patch Panel – 24Port – Drawer Style	each	32						
2.2	ST to ST Simplex Multi Mode OM1 Fibre Optic Cable, 62.5/125µ	meter	128						
2.3	T Duplex Multi Mode OM1	each	326						
2.4	ST to ST Multimode Simplex Fibre Optic Adapter	each	52						
2.5	Brush Panel	each	8						
2.6	Cage Nuts/Screws	each	80						
3	Supply and Install New or Repaired Optic Fibre Cable								
3.1	Heavy Duty Duct 24 Core Multi Mode Fibre Cable LT50SJNA24B	Metre	6000						
3.2	Optic Fibre Jointing - 24 Core Fibre Joint	Each	20						
3.3	Trenching for New Optic Fibre - 0.6 metre deep x 0.5 m wide trench								
3.3.1	In Soft Soil	m			5000				
3.3.2	In Intermediate Soil	m			500				
3.3.3	In Hard Rock	m			500				
3.4	Backfilling, compaction and reinstatement of trenching to Specification - 93% Mod AASHTO	m			6000				
3.5	Supply and Install, HDPE Pipe, 32 Dia	m			6000				
TOTAL SECTION 3: (To be Carried Forward to Summary of Totals)									

SCHEDULE OF QUANTITIES

PACKAGE 3: POLE MOUNTED BREAKER TELEMETRY



SECTION 4: AUTO-RECLOSERS REMOTE MONITORING AND CONTROL

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
1	Control System Hardware								
1.1	Modbus RTU/ASCII/Modbus TCP Gateway	EA	74						
1.2	Dual Sim 4G/LTE Router complete with Antenna	EA	74						
1.3	4G/LTE Signal Repeater kit	EA	3						
1.4	DC 3A Miniature Circuit Breaker	EA	73						
1.5	Satellite Synchronised Time Server	EA	1						
1.5	Outdoor Enclosure IP66 450x300x220mm GREY complete with terminals and trunking and mounting brackets	EA	73						
2	Main Control Room Hardware								
2.1	IEC 61850-3 28-port Layer 2 full Gigabit modular managed Ethernet switches	EA	1						
2.2	Rackmount computers with 11th Gen Intel® Core™ Tiger Lake processor	EA	2						
2.3	Other Accessories	Sum	1						
3	Installation and Commissioning								
3.1	Kick Off Meeting	Sum			1				
3.2	Evaluation of Installation Points	Sum			1				
3.3	Network Architectural and Installation Design	Sum			1				
3.5	Power System SCADA System Development and Configuration	Sum			1				
3.6	System Integration and Testing	Sum			1				
3.7	Factory Acceptance testing	Sum			1				
3.8	Install SCADA Hardware and Communication Equipment At Main Control Room	Sum			1				
3.9	Install 73 Telemetry Boxes and connect to the Autorecloser Control panel	No			73				
3.10	Configure the Communication Modules	Sum			1				

SCHEDULE OF QUANTITIES

PACKAGE 3: POLE MOUNTED BREAKER TELEMETRY



SECTION 4: AUTO-RECLOSERS REMOTE MONITORING AND CONTROL

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
3.11	Test communication to all 73 Nodes	Sum			1				
3.12	Commission The System	Sum			1				
3.13	Training	Sum			1				
3.14	Optimisation	Sum			1				
3.15	As Built Documentation	Sum			1				
4	Critical Spares								
4.1	Modbus RTU/ASCII/Modbus TCP Gateway	EA	4						
4.2	Dual Sim 4g/Lte Router complete with Antenna	EA	4						
4.3	4G/Lte Signal Repeater kit	EA	1						
4.4	DC 3A Miniature Circuit Breaker	EA	4						
5	Recurring Monthly Costs								
5.1	IoT Sim Cards for Private Access Name cost per month	EA	174						
5.2	24/7 System Support	Month	1						
TOTAL SECTION 4: (To be Carried Forward to Summary of Totals)									

SCHEDULE OF QUANTITIES
PACKAGE 4: CONTROL ROOM CIVIL WORKS



SECTION 5: REPAIRS TO CONTROL ROOM AT TZANEEN MAIN

Item	Description	Unit	Material Qty	Material Rate	Labour Qty	Labour Rate	Material Total	Labour Total	Total
1	Site Clearing	m ²	230						
2	Control Room Repairs and Upgrading								
2.1	Re plaster all walls	m ²	230		230				
2.2	Re paint all walls	m ²	230		230				
2.3	Replace Ceiling	m ²	230		230				
2.4	Replace floor tiles	m ²	230		230				
3	Air Conditioning								
3.1	Supply and Install new split unit air conditioner 12000 BTU	Each	2		2				
4	Nameboard								
4.1	ST to ST Multimode Simplex Fibre Optic Adapter	Each	1		1				
5	Electrical Repairs								
5.1	Re-wire existing Distribution Board	Sum	1		1				
5.2	Replace Existing Light fittings with New	No	6		6				
5.3	Issue New Certificate of Compliance	Sum	1		1				
TOTAL SECTION 5: (To be Carried Forward to Summary of Totals)									