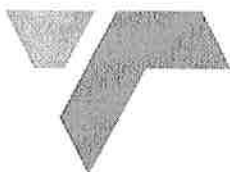


TRANSNET



TRANSNET SOC LIMITED
(REGISTRATION NO.1990/000900/30)
TRADING AS
TRANSNET FREIGHT RAIL

NEC3 Engineering & Construction Short Contract
(ECSC)

RFQ No. ERAC NS2287 16163CIDB

The supply, install, test and commission of an 11kV/400V N
miniature substation at the Welgedacht hostels under the
control of the Real Estate Management, Pretoria.

Opening on: Friday, 12th December 2014
Closing on: Thursday, 8th January 2015 at 10h00
Validity period ending on: 4th April 2015

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Part T1: Tendering Procedures

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PART T1: TENDERING PROCEDURES

T1.1 TENDER NOTICE AND INVITATION TO TENDER

RFQ No. ERAC NS2287 16263CIDB

Transnet SOC Limited trading as Transnet Freight Rail invites tenders for the supply, install, test and commission of an 11kV/400V miniature substation at the Welgedacht hostels under the control of the Real Estate Management, Pretoria.

Respondents should have a CIDB contractor grading of **1EP or higher**.

On or after Friday, 12th December **2014**, the RFQ documents may be inspected at, and are obtainable from the office of the Transnet Freight Rail Advice Centre, Inyanda House 1, Ground Floor, 21 Wellington Road, Parkton, Johannesburg, **free of charge** and will only be available for collection between 09:00 and 15:00 from Friday, 12th December **2014** until Thursday, 18th December **2014**.

Queries relating to the administrative issues of these documents may be addressed to:

Mr. Nico Swart

Tel. No. 012 315 3083

Fax.: 012 315 2138

E-mail: nico.swart3@transnet.net

FORMAL BRIEFING

A **compulsory information briefing session** will be conducted in the Jacaranda boardroom, 3rd floor, Nzasm building, c/o Paul Kruger and Minnaar Streets, Pretoria on Friday, 19th December **2014** at **10h00**. A site visit will be conducted after the briefing session. Respondents shall be responsible for their own travel arrangements and cost regarding the briefing session and site inspections.

Contact person: **Mr Zacharia Mangena at tel. no. 012 315 2117 or cell No. 083 280 6173.**

Please note that when visiting a site, safety boots and a safety vest should be worn. As the site visit may be held in an operational area of Transnet, all people entering the premises **may be subjected to a substance abuse test**. This is a standard operational requirement for TFR, when entering any operational area in order that TFR may address the risk of injury.

Any person that fails such test will not be permitted to enter the premises and thereby forfeits. Rights to be allowed access to the briefing session and will subsequently not be permitted to submit a bid for the RFQ.

- A Certificate of Attendance in the form set out in Returnable Schedules must be completed.
- Submitted with your Tender as proof of attendance is required for a compulsory site meeting and/or RFQ briefing.

- Respondents failing to attend the compulsory RFQ briefing/site inspection will be disqualified.
- Respondents without a valid RFQ document in their possession will not be allowed to attend the RFQ briefing/site visit.
- The briefing session will start punctually as indicated before and information will not be repeated for the benefit of Respondents arriving late.

Tenders may only be submitted on the tender documentation that is issued. Telegraphic, telephonic, facsimile and late tenders will not be accepted.

Tenders, which must be completed as indicated in Tender Data of this RFQ are to be submitted as follows:

METHOD: Hand delivered: The envelope is to be deposited in the tender box which is located in the foyer on the ground floor and should be addressed as below:

CLOSING DATE AND TIME: Thursday, 8th January 2015, 10h00

CLOSING VENUE: The Secretary
Transnet Acquisition Council
Ground floor, Tender box
Inyanda House 1
21 Wellington Road
Parktown
Johannesburg
2001

It should be noted that the tender box is located at the main entrance and is accessible to the public 24 hours a day, 7 days a week

A) Responses to RFQ

Responses to this RFQ tender must not include documents or reference relating to any other Tender or proposal. Any additional conditions must be embodied in an accompanying letter. No slips are to be attached to the tender documents. Any additional conditions must be embodied in an accompanying letter. Alterations, additions or deletions must not be made by the Respondent to the actual tender documents. Tenders submitted by Respondents must be neatly bound and the inclusion of loose documents must be avoided.

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

Compliance of tender(s) with Transnet's requirements is the sole responsibility of the Respondent and any cost incurred in subsequent modifications to or replacement of equipment accepted by Transnet SOC Limited in good faith on the grounds of certified compliance with specified standards by the Contractor and in fact found to be inadequate in such respects, will be to the relevant Respondents account.

B) Broad-Based Black Economic Empowerment [B-BBEE]

Transnet fully endorses and supports the Government's Broad-Based Black Economic Empowerment Programme and it would therefore prefer to do business with local business enterprises who share these same values. Transnet will accordingly allow a "preference" to companies who provide a valid B-BBEE Verification Certificate. All procurement transactions will be evaluated accordingly.

1.1 B-BBEE Scorecard and Rating

1.1.1 As prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations, Respondents are to note that the following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R1,000,000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R1,000,000 (all applicable taxes included).
- Bidders are to note that if the 80/20 preference point system is stipulated in this RFQ and if all Bids received exceed R1,000,000.00, the RFQ must be cancelled.
- The value of this bid is estimated to be below R1,000,000 (all applicable taxes included); and therefore the **80/20** system shall be applicable.

1.1.2 When Transnet invites prospective suppliers to submit Proposals for its various expenditure programmes, it requires Respondents to have their B-BBEE status verified in compliance with the Codes of Good Practice issued in terms of the Broad Based Black Economic Empowerment Act No. 53 of 2003.

1.1.3 The Department of Trade and Industry recently revised the Codes of Good Practice on 11 October 2013 [Government Gazette No. 36928]. The Revised Codes will replace the Black Economic Empowerment Codes of Good Practice issued on 9 February 2007. The Revised Codes provide for a one year transitional period starting 11 October 2013. During the transitional period, companies may elect to be measured in terms of the Revised Codes or the 2007 version of the Codes. After the first year of the implementation of the Revised Codes, B-BBEE compliance will be measured in terms of the Revised Codes without any discretion. Companies which are governed by Sector-specific Codes will be measured in terms of those Sector Codes.

1.1.4 As such, Transnet will accept B-BBEE certificates issued based on the Revised Codes. Transnet will also continue to accept B-BBEE certificates issued in terms of the 2007 version of the Codes provided it was issued before 10 October 2014. Thereafter, Transnet will only accept B-BBEE certificates issued based on the Revised Codes.

1.1.5 Respondents are required to complete Annexure A [the B-BBEE Preference Point Claim Form] and submit it together with proof of their B-BBEE Status as stipulated in the Claim Form in order to obtain preference points for their B-BBEE status.

1.1.6 **Note: Failure to submit a valid and original B-BBEE certificate or a certified copy thereof at the closing date of this RFQ will result in a score of zero being allocated for B-BBEE.**

2.0 Communication

2.1 Respondents are warned that a response will be liable for disqualification should any attempt be made by a Respondent either directly or indirectly to canvass any officer(s) or employee of Transnet in respect of this RFQ between the closing date and the date of the award of the business.

2.2 A Respondent may, however, before the closing date and time, direct any written enquiries relating to the RFQ to the following Transnet employee:

Name: **Yvonne Scannell (tel. 012 3152059)** Email: Yvonne.scannell@transnet.net

2.3 Respondents may also, at any time after the closing date of the RFQ, communicate with the Secretariat of the Transnet Acquisition Council on any matter relating to its RFQ response:

2.4 Telephone: **011 544 9486** Email: prudence.nkabinde@transnet.net

3.0 Tax Clearance

3.1 The Respondent's original and valid Tax Clearance Certificate must accompany the tender. Note that no business shall be awarded to any Respondent whose tax matters have not been declared by SARS to be in order.

4.0 VAT Registration

4.1 The valid VAT registration number must be stated here: _____ [if applicable].

5.0 Legal Compliance

5.1 The successful Respondent shall be in full and complete compliance with any and all applicable national and local laws and regulations.

6.0 Changes to Tenders

6.1 Changes by the Respondent to its submission will not be considered after the closing date and time.

7.0 Pricing

7.1 All prices must be quoted in South African Rand on a fixed price basis, excluding VAT.

8.0 Prices Subject to Confirmation

8.1 Prices quoted which are subject to confirmation will not be considered.

9.0 Negotiations

9.1 Transnet reserves the right to undertake post-tender negotiations with selected Respondents or any number of shortlisted Respondents.

10.0 Binding Offer

10.1 Any Tender furnished pursuant to this Request shall be deemed to be an offer. Any exceptions to this statement must be clearly and specifically indicated.

11.0 Disclaimers

11.1 Transnet is not committed to any course of action as a result of its issuance of this RFQ and/or its receipt of a Tender in response to it. Please note that Transnet reserves the right to:

- modify the RFQ's goods / service(s) and request Respondents to re-bid on any changes;
- reject any Tender which does not conform to instructions and specifications which are detailed herein;
- disqualify Tenders submitted after the stated submission deadline;
- not necessarily accept the lowest priced Tender;
- reject all Tenders, if it so decides;
- place an order in connection with this Tender at any time after the RFQ's closing date;
- award only a portion of the proposed goods / service/s which are reflected in the scope of this RFQ;
- split the award of the order/s between more than one Supplier/Service Provider; or make no award at all.
- Transnet reserves the right to award business to the highest scoring bidder/s unless objective criteria justify the award to another bidder.
- Transnet reserves the right to lower the threshold for Technical by **10%** [ten percent] if no Bidders pass the predetermined minimum threshold.
- Transnet reserves the right to accept the whole or any part of a tender. Transnet also reserves the right to negotiate terms and conditions with all, or a short listed group of contenders, or the preferred tenderer, should it be deemed necessary.

12.0 Transnet's supplier integrity pact

12.1 Transnet's Integrity Pact requires a commitment from suppliers and Transnet that they will not engage in any corrupt and fraudulent practices, anti-competitive practices; and act in bad faith towards each other. The Integrity Pact also serves to communicate Transnet's Gift Policy as well as the remedies available to Transnet where a Respondent contravenes any provision of the Integrity Pact.

12.2 Respondents are required to familiarise themselves with the contents of the Integrity Pact which is available on the Transnet Internet site [www.transnet.net/Tenders/Pages/default.aspx] or on request. Furthermore, Respondents are required to certify that they have acquainted themselves with all the documentation comprising the Transnet Integrity Pact and that they fully comply with all the terms and conditions stipulated in the Transnet Supplier Integrity Pact as follows:

YES	
-----	--

NO	
----	--

Should a Respondent need to declare previous transgressions or a serious breach of law in the preceding 5 years as required by Annexure A to the Integrity Pact, such declaration must accompany the Respondent's bid submission.

Transnet invites its valued suppliers to report any allegations of fraud, corruption or other unethical activities to Transnet Tipp-offs Anonymous, at any of the following addresses/contact numbers:-

- Toll free anonymous hotline - 0800 003 056
- E-mail: Transnet@tip-offs.com
- Fax number 0800 007 788
- Freepost DN 298, Umhlanga rocks, 4320.

CONFIDENTIALITY IS GUARANTEED

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SUPPLIER CODE OF CONDUCT

Transnet aims to achieve the best value for money when buying or selling goods and obtaining services. This however must be done in an open and fair manner that supports and drives a competitive economy. Underpinning our process are several acts and policies that any supplier dealing with Transnet must understand and support. These are:

- The Transnet Supply Chain Policy
- Section 217 of the Constitution - the five pillars of Public PSCM [Procurement and Supply Chain Management]: fairness, equity, transparency, competitiveness and cost effectiveness;
- The Public Finance Management Act [PFMA];
- The Preferential Procurement Policy Framework Act [PPFFA];
- The Broad-Based Black Economic Empowerment Act [B-BBEE]; and
- The Prevention and Combating of Corrupt Activities Act.

This Code of Conduct has been included in this RFQ to formally appraise prospective Transnet Suppliers of Transnet's expectations regarding the behaviour and conduct of its Suppliers.

Prohibition of bribes, kickbacks, unlawful payments, and other corrupt practices

Transnet is in the process of transforming itself into a self-sustaining State Owned Company [SOC], actively competing in the logistics industry. Our aim is to become a world class, profitable, logistics organisation. As such, our transformation is focused on adopting a performance culture and to adopt behaviours that will enable this transformation.

- a) *Transnet will not participate in corrupt practices and therefore expects its Suppliers to act in a similar manner.*
- Transnet and its employees will follow the laws of this country and keep accurate business records that reflect actual transactions and payments to our Suppliers.
Employees must not accept or request money or anything of value, directly or indirectly, to:
 - ✦ illegally influence their judgement or conduct or to ensure the desired outcome of a sourcing activity;
 - ✦ win or retain business or to influence any act or decision of any decision stakeholders involved in sourcing decisions; or
 - ✦ gain an improper advantage.
 - There may be an occasion when a Supplier is confronted with fraudulent or corrupt behaviour by a Transnet employee. We expect our Suppliers to use our "Tip-offs Anonymous" Hot line to report these acts [0800 003 056].
- b) *Transnet is firmly committed to the ideas of free and competitive enterprise.*
- Suppliers are expected to comply with all applicable laws and regulations regarding fair competition and antitrust.
 - Transnet does not engage with non-value adding agents or representatives solely for the purpose of increasing B-BBEE spend [fronting].

- c) *Transnet's relationship with Suppliers requires us to clearly define requirements, exchange information and share mutual benefits.*
- Generally, Suppliers have their own business standards and regulations. Although Transnet cannot control the actions of our Suppliers, we will not tolerate any illegal activities. These include, but are not limited to:
 - ✦ misrepresentation of their product [e.g. origin of manufacture, specifications, intellectual property rights];
 - ✦ collusion;
 - ✦ failure to disclose accurate information required during the sourcing activity [e.g. ownership, financial situation, B-BBEE status];
 - ✦ corrupt activities listed above; and
 - ✦ harassment, intimidation or other aggressive actions towards Transnet employees.
 - Suppliers must be evaluated and approved before any materials, components, products or services are purchased from them. Rigorous due diligence is conducted and the Supplier is expected to participate in an honest and straight forward manner.
 - Suppliers must record and report facts accurately, honestly and objectively. Financial records must be accurate in all material respects.

Conflicts of interest

A conflict of interest arises when personal interests or activities influence [or appear to influence] the ability to act in the best interests of Transnet. Examples include, but are not limited to:

- Transnet employees awarding business to entities in which their family members or business associates have an interest
- Transnet employees having a financial interest in a bidding entity

Bidding entities are required to disclose any interest/s which exists between themselves and any employee and/or Transnet Board member.

SIGNED at _____ on this _____ day of _____ 20____

SIGNATURE OF WITNESS

SIGNATURE OF RESPONDENT

Part T1.2: Tender Data

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T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annexure F of the CIDB Standard for Uniformity in Construction Procurement. (January 2009) as published in government Gazette No. 31823, Board Notice 12 of 2009 of 30 January 2009, subsequently amended (May 2010), Board Notice 86 of 2010. (See www.cidb.org.za).

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

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

Clause	Data
F.1.1	The <i>Employer</i> is Transnet SOC Limited. (Reg. No 1990/000900/30)
F.1.2	The tender documents issued by the <i>Employer</i> comprise: Part T: The Tender Part T1: Tendering procedures T1.1 Tender notice and invitation to tender T1.2 Tender data Part T2: Returnable documents T2.1 List of Returnable Documents T2.2 Returnable Schedules Part C: The Contract Part C1: Agreements and contract data C1.1 Form of Offer and Acceptance C1.2 Contract Data: Works Information C1.3 Contract Data: Particular Information Part C2: Pricing data C2.1 Pricing instructions C2.2 Activity Schedule/Bill of Quantities/Price list Part C3: Scope of work C3.1 Works Information C3.2 Secondary specifications C3.3 General Specifications Part C4: Site information C4 Site information

F.1.4 The Employer's agent is: **Regional Procurement Manager**
 Name: **Yvonne Scannell**
 Address: **Room 222, Nzasm Building, c/o Paul Kruger and Minnaar Streets, Pretoria.**
 Tel: **012 3152059**
 Cell: **0823357916**
 E-mail: **Yvonne.scannell@transnet.net**

F1.6 The competitive negotiation procedure may be applied

F.2.1 Only those tenderers who satisfy the following eligibility criteria to submit tenders:
 F.2.1.1 The following Tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a Tenderer grading designation equal to or higher than a Tenderer grading designation determined in accordance with the sum tendered for a **1EP class** of construction work, are eligible to submit tenders.

- a) Tenderers who have a Tenderer grading designation equal to or higher than a Tenderer grading designation determined in accordance with the sum tendered for a **1EP class** of construction work; and

Joint ventures are eligible to submit tenders provided that:

1. every member of the joint venture is registered with the CIDB;
2. the lead partner has a Tenderer grading designation in the **1EP class** of construction work; and
3. the combined Tenderer grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Tenderer grading designation determined in accordance with the sum tendered for a **1EP class** of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

Pre-qualifying criteria:

Transnet will utilise the following criteria [not necessarily in this order] in choosing a Supplier/Service Provider, if so required:

Criterion/Criteria	Explanation
Administrative responsiveness	Completeness of response and mandatory returnable documents. <ul style="list-style-type: none"> • A valid letter of Good Standing issued by the Department of Labour. • A valid letter of registration as an Electrical Contractor with the Department of Labour. • Verify the validity of all returnable documents, i.e. of active and valid CIDB grading certificates of 1EP or higher in respect of each activity.

<p>Substantive responsiveness</p>	<p>Prequalification criteria, if any, must be met and whether the Bid materially complies with the scope and/or specification given.</p> <ul style="list-style-type: none"> • Check tenders for completeness, verify names of entities against correspondence and documents, check that documents have been date stamped, consecutive stamped number and initialled, etc. • A fully completed clause by clause statement of compliance to the General conditions of contract, the Works Information and general specifications. • Whether the bid contains a completed & signed priced offer • A bar chart showing the duration of the contract completion period with a method statement and approach paper.
<p>Functionality Threshold</p>	<p>As prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations. Tenderers are to note that functionality is included as threshold with a prescribed percentage threshold of 60%, i.e.:</p> <ul style="list-style-type: none"> • Previous experience in the relevant field, • Technical capacity and resources including plan and equipment of the executing of the work, • Health, Risk and Safety Plan relevant to scope of work will be considered as part of the technical evaluation. • Delivery period
<p>Final weighted evaluation based on 80/20 preference point system</p>	<ul style="list-style-type: none"> • Pricing and price basis [firm] - whilst not the sole factor for consideration, competitive pricing and overall level of unconditional discounts¹ will be critical • B-BBEE status of company - Preference points will be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table indicated in Annexure A.

Only those Tenderers who attain the minimum number of evaluation points (60 points) for functionality will be eligible for further evaluation, failure to meet the minimum threshold will result in the tender being disqualified and removed from further consideration.

Thresholds	Minimum Percentage [%]
Technical / functionality	60 %

Maximum number of tender evaluation points		
Technical/functionality (quality) criteria	Sub-criteria	Maximum number of points
Previous experience in the relevant field		20
Technical capacity (Plant & equipment) and resources		35

Risk, health and safety plan relevant to scope of work		20
Delivery period		25
Maximum possible score for quality		100

The following applicable values will be utilised when scoring each criterion mentioned above:

Points	Interpretation
0	Non Responsive
1	Poor
2	Average
3	Good
4	Very good
5	Excellent

The minimum threshold for technical/functionality [Stage Three] must be met or exceeded for a Respondent's Proposal to progress to the next stage for final evaluation

F.2.7 The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list.

F.2.12 If a Tenderer wishes to submit an alternative tender offer, the only criteria permitted for such alternative tender offer is that it demonstrably satisfies the *Employer's* standards and requirements, the details of which may be obtained from the *Employer's* Agent.

Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the *Employer* to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the *Employer's* standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal.

Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the Tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the *Employer's* standards and requirements.

F.2.13.2 Return all returnable documents to the Employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing in black ink.

F.2.13.3 Parts of the tender offer communicated on paper shall be submitted as an original, plus one copy.

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:

If posted, the envelope must be addressed to:

**The Chairperson
Transnet Freight Rail Acquisition Council
P.O. Box 4244
JOHANNESBURG
2000**

and must be dispatched in time for sorting by the Post Office to reach the Post Office Box indicated above, before the closing time of the tender.

If delivered by hand, to be deposited to the Transnet Freight Rail Acquisition Council tender box which is located in the foyer, and to be addressed as follows:

**The Chairperson
Transnet Freight Rail Acquisition Council
Ground Floor, Inyanda House
21 Wellington Road
Park Town
JOHANNESBURG
2001**

It should also be noted that the above tender box is accessible to the public 24 hours per day, 7 days a week.

The measurements of the "tender slot" are 500mm wide x 100mm high, and Tenderers must please ensure that tender documents/files are not larger than the above dimensions. Tenders, which are too bulky (i.e. more than 100mm thick) must be split into two or more files, and placed in separate envelopes.

Identification details:

Tenders must be submitted before the closing hour on the date as shown in F.2.15 below, and must be enclosed in a sealed envelope which must have inscribed on the outside:

- (a) Name of Tenderer (Insert company Name)
- (b) Contact person and details (Insert details)
- © The Tender Number (Insert)
- (b) Description of work (Insert)
- (c) Closing date of tender (Insert)

NO LATE TENDERS WILL BE ACCEPTED

F.2.13.6 A two-envelope procedure will not be followed.

F.2.13.9 Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.

F.2.15 The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.

F.2.16 The tender offer validity period is **12 weeks. (4th April 2015).**

F2.18 Provide, on request by the Employer, any other material information that has bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the Employer for the purpose of a full and fair risk assessment. Should the tenderer not provide this material, or a satisfactory reason as to why it cannot provide, by the time for submission stated in the Employer's request, the Employer may regard the tender offer as non-responsive.

F2.22 Return all retained tender documents within 28 days after the expiry of the validity period.

F.2.23 The Tenderer is required to submit with his tender:

1. A valid original TAX clearance certificate issued by the South African Revenue Services
2. A valid certified SANAS or IRBA B-BBEE accreditation certificate.
3. A Certificate of Registration issued by the Construction Industry Development Board or a copy of the application Form for registration in terms of the construction Industry Development Board Act (Form F006) .

Note: Refer to Section T2.1 for list of Returnable documents.

F.3.4 The time and location for opening of the tender offers are:

Time: **12:00** on the closing date of tender.

Location: **Transnet Freight Rail Acquisition Council, Ground Floor, Inyanda House,
21 Wellington Road, Park Town, JOHANNESBURG**

F.3.11.3 The procedure for the evaluation of responsive tenders is Method 2.

- 90 where the financial value excluding of VAT of one or more responsive tenders received have a value in excess of R1,000,000; or
- 80 where the financial value excluding of VAT of one or more responsive tender offers equals or is less than R1,000,000.

Up to 100 minus W_1 tender evaluation points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed.

Should the BBBEE rating not be provided, Transnet reserves the right to award no points and/or declare the tender void. Transnet also reserves the right to carry out an independent audit of the tenderers scorecard components at any stage from the date of close of the tenders until completion of the contract. Tenderers with no accreditation will score zero points for preferencing.

Evaluation and Final Weighted Scoring

a) Price Criteria [Weighted score 80 points]:

Transnet will utilise the following financial formula in its evaluation of Price:

$$PS = 80 \left(1 - \frac{Pt - Pmin}{Pmax} \right) \text{ OR}$$

Where:

- Ps = Score for the Bid under consideration
- Pt = Price of Bid under consideration
- $Pmin$ = Price of lowest acceptable Bid

b) Broad-Based Black Economic Empowerment criteria [Weighted score 20 points]

- B-BBEE - current scorecard

SUMMARY: Applicable Final Evaluated Weightings

Evaluation Criteria	Final Weighted Scores
Price	80
B-BBEE - Scorecard	20
TOTAL SCORE:	100

F.3.13. Tender offers will only be accepted if:

- a) The Tenderer submits an **original valid Tax Clearance Certificate** issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations.

- b) The Tenderer is registered with the Construction Industry Development Board in an appropriate Tenderer grading designation;
- c) The Tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.
- d) The tenderer does not appear on Transnet list for restricted tenderers.
- e) The tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the Tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders for participate in the contract.
- f) The tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer.
- g) The *Employer* is reasonably satisfied that the tenderer has in terms of the Construction Regulations 2003, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely.

F.3.17 The number of paper copies of the signed contract to be provided by the Employer is one.

1 Additional tender conditions:

1.1 The Tenderer is deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the *works* and of the prices stated in the priced Activity Schedule in the *works* Information. The rates and prices (except in so far as otherwise provided in the Tender) collectively cover full payment for the discharge of all his obligations under the Contract and all matters and things necessary for the proper completion of the *works*.

2 The tenders shall be completed in **black ink only**.

3 Tender submissions

3.1 Tenderers shall duly fill in the attached Activity list/BOQ/Price list. Items not reflected in the Activity list/BOQ/Price list, but covered in the particular specification or agreed at site meetings, shall be added to the Activity list/BOQ/Price list by the Tenderer and quoted for accordingly.

3.2 Tenderers shall submit qualifications of staff that will be performing the works. Only qualified technical personnel shall perform the works on the electrical equipment or installations thereof.

3.3 **Clause by clause statement of compliance to General conditions of Contract, Works Information, Particular specification, technical specifications and General specifications**

- **Tenderers shall complete the clause-by-clause statement of compliance to the various specifications attached to this tender document.**
- *Tenderers shall motivate a statement of non-compliance. Indicate statement of compliance and motivate (give reasons for not complying)*
- *Indicate other statements which don't require compliance.*

Note: The committee will take decision to give an average score to companies who indicated their compliance but with short comings.

3.4 **The Tenderer shall provide a provisional Gantt or a similar bar chart showing when the works will be done and energised.** This chart shall be submitted with the tender submission on the closing date of the tender. Should a Tenderer be successful in winning a tender, a final bar chart shall be submitted within 14 days after the award of the contract to the Employer by the successful Tenderer.

- 3.5 The Tenderer shall indicate how the work will be executed and commissioned. (Bar chart, approach paper and method statement).
- 3.6 During the duration of the contract period, the successful Tenderer shall be required to inform the Employer / Deputy of any changes to equipment offered and submit detailed information on replacement equipment for approval prior to it being used on this contract.
- 3.7 The Tenderer shall supply a site diary and site instruction books, both books shall be of triplicates carbon copies.
- 3.8 Health, Risk and safety plan required:

The Respondents tendering for this project must make sure that the following points are covered when compiling their Health, Risk and Safety Plan relevant to the scope of works,

Part A: Health, Risk and safety Plan

SHE Management Structure

- Work Supervisor
- Safety Officer
- Health & safety office

Education and Training

- Induction training (Construction Regulation 7(9))
- Site Specific Training.
- Certificate of Competence.

Emergency Planning – Evacuation plan

- Client procedure.
- Site Procedure.

Health and Safety Communications

- Safety/Toolbox talks.
- Incident Recall.

Safe Working Procedures and Methods

- Safe Operating Procedures.
- Task observations
- Method Statements.

Personal Protective Equipment and Clothing

- PPE required after all other controls have been considered.
- PPE proof of issue.

3.9 Minimum plant and equipment required: Fully equipped electrical toolbox, welding machine, electrical test meters (multimeter), 3 ton crane, 5 ton lorry.

Resources: Fully qualified artisans and a letter showing registration with the Department of Labour as an electrical Contractor.

3.10 Duration of contract: To be indicated on a bar chart. Method statement and approach paper to be submitted with the bar chart.

3.11 Experience; Refer to returnable schedule to be completed. At least five relevant references will be an advantaged.

4.0 STAGE FIVE: Post Tender Negotiations (if applicable)

Transnet reserves the right to conduct post tender negotiations with a shortlist of Respondent(s). The shortlist could comprise of one or more Respondents. Should Transnet conduct post tender negotiations, Respondents will be requested to provide their best and final offers to Transnet based on such negotiations. A final evaluation will be conducted in terms of 80 and the contract will be negotiated and awarded to the successful Respondent(s).

4.1 Banking Details

BANK: _____
BRANCH NAME / CODE: _____
ACCOUNT HOLDER: _____
ACCOUNT NUMBER: _____

4.8 Company Registration

Registration number of company / C.C. _____
Registered name of company / C.C. _____

Only unconditional discounts will be taken into account during evaluation. A discount which has been offered conditionally will, despite not being taken into account for evaluation purposes, be implemented when payment is effected

4.9 **Disclosure of Prices Quoted**

Tenderers must indicate here whether Transnet may disclose their quoted prices and conditions to other Tenderers:

YES NO

4.10 **Returnable Documents**

Returnable Documents means all the documents, Sections and Annexures, as listed in the tables below.

- a) Tenderers are required to submit with their Tenders the mandatory Returnable Documents, as detailed below.

Failure to provide all these Returnable Documents at the Closing Date and time of this RFQ will result in a Tenderer's disqualification. Tenderers are therefore urged to ensure that all these Documents are returned with their Tenders.

All Sections, as indicated in the footer of each page, must be signed, stamped and dated by the Tenderer. Please confirm submission of these mandatory Returnable Documents by so indicating [Yes or No] in the table below:

Mandatory Returnable Documents		Submitted [Yes or No]
Part C3 :	Form of Offer and Acceptance and Price list	
Part T2.2:	Returnable schedules: Certificate of attendance of site meeting/RFQ briefing	
Part T2.2:	Returnable Schedules: Clause by clause statement of compliance to the General Conditions of contract, Works information, technical specifications and general specifications.	
A valid letter of Good standing issued by Department of Labour An active CIDB grading certificate of 1EP or higher. A letter of registration as an Electrical Contractor with the Department of Labour.		

- b) In addition to the requirements of section (a) above, Tenderers are further required to submit with their tenders the following essential Returnable Documents as detailed below.

Failure to provide all these Returnable Documents may result in a Tenderer's disqualification. Tenderers are therefore urged to ensure that all these documents are returned with their Tenders.

All Sections, as indicated in the footer of each page, must be signed, stamped and dated by the Tenderer. Please confirm submission of these essential Returnable Documents by so indicating [Yes or No] in the table below:

Essential Returnable Documents	Submitted [Yes or No]
Part T1.1: Tendering Procedures: Notice to Tenderers	
<ul style="list-style-type: none"> - Valid and original B-BBEE Verification Certificate or certified copy thereof [Large Enterprises and QSEs] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the RFQ will result in an automatic score of zero for preference 	
<ul style="list-style-type: none"> - Valid and original B-BBEE certificate/sworn affidavit or certified copy thereof from auditor, accounting officer or SANAS accredited Verification Agency [EMEs] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the RFQ will result in an automatic score of zero being allocated for preference 	
<ul style="list-style-type: none"> - In the case of Joint Ventures, a copy of the Joint Venture Agreement or written confirmation of the intention to enter into a Joint Venture Agreement 	
<ul style="list-style-type: none"> - Original valid Tax Clearance Certificate [Consortia / Joint Ventures must submit a separate Tax Clearance Certificate for each party] 	
Part T2.1: Returnable documents / Schedules	
Safety plan and fall protection plan in accordance with the construction Regulations of 2003 and Transnet E4E	
Quality assurance / control plan	
Environmental Management plan	
Proposed organisation and staffing	
Bar chart with method statement and approach paper	
Vendor application form:	
Certified copies of IDs of shareholder/directors/members [as applicable]	
Certified copies of IDs of shareholder/directors/members [as applicable]	
Certified copies of the relevant company registration documents from Companies and Intellectual Property Commission (CIPC)	
Certified copies of the company's shareholding/director's portfolio	
<ul style="list-style-type: none"> - Original cancelled cheque or bank verification of banking details 	

Essential Returnable Documents	Submitted [Yes or No]
- Entity's letterhead]	
- Certified copy of VAT Registration Certificate [RSA entities only]	
- Certified copy of valid Company Registration Certificate [if applicable]	
- A signed letter from Tenderer's auditor or accountant confirming most recent annual turnover figures	
Part T2.2: Returnable schedules:	
Certificate of attendance at the information briefing session/site inspection	
Resolution of board of directors	
Schedule of Tenderer's experience	
Schedule of proposed subcontractors	
Certificate of authority for joint ventures	
Schedule of plant and equipment	
Record of addenda	
Supplier Declaration form	
Compulsory enterprise questionnaire	
Curriculum vitae of key personnel	
Contractual safety clauses which will form part of any resulting contract	
Proposed amendments and qualifications	
Labour payment schedule	
Part C3.1:: Contract Data : General Conditions of Contract (NEC3 ECSC3), Works Information and Particular specification	
Part C3.2. Pricing Data: Activity list/BOQ/Price list	

Part T2: Returnable Documents/Schedules

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PART T2: RETURNABLE DOCUMENTS / SCHEDULES

T2.1 LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

1.0 Returnable documents required for tender evaluation purposes

No	Returnable Documents
1	Letter of Good Standing with the Compensation Commissioner
2	Safety Plan and Fall Protection Plan in accordance with the Construction Regulations of 2003 and Transnet's E4E
3	Quality Assurance/control Plan
4	Environmental Management Plan
5	Proposed Organization and Staffing
6	Certified Copy of Share Certificates CK1 & CK2
7	Certified Copy of Certificate of Incorporation and CM29 and CM9
8	Certified Copy of Identity Documents of Shareholders / Directors / Members (where applicable)
9	Original or certified cancelled cheque OR original or certified letter from the bank verifying banking details (with bank stamp and signature)
10	Current and original or certified Tax Clearance Certificate
11	Certified VAT registration certificate
12	A signed letter from the Accountant/Auditor confirming most recent annual turnover and percentage black ownership in the company AND/OR certified BBBEE certificate and scorecard from an accredited rating agency
13	Bar chart, programme (approach paper) and method statement
14	A valid active CIDB grading certificate of 1EP or higher
15	Statement of compliance or non-compliance with all clauses of the Scope of Works and all the technical specifications. The clause-by-clause statement of compliance shall take the form of a separate document listing all the clause numbers of all the above specifications indicating the individual statement of compliance or non-compliance. Tenderers shall motivate a statement of non-compliance.

T2.2 RETURNABLE SCHEDULES

The tenderer must complete the following returnable schedules:

2.0 Returnable Schedules required for tender evaluation purposes

No	Returnable schedules
1	Certificate of Attendance of Information Briefing Session or site inspection
2	Certificate of Authority for Signatory (Resolution by Board)
3	Schedule of Tenderers experience
4	Schedule of Subcontractors (where applicable)
5	Certificate of authority for joint ventures (where applicable)
6	Schedule of Plant and Equipment (Tools and Machinery)
7	Record of Addenda to Tender Document
8	Supplier declaration form Duly completed SDF (Supplier declaration form)
9	Compulsory Enterprise questionnaire
10	Experience of Key Staff in the form of Curriculum Vitae
11	Transnet SOC limited contractual safety clauses which will form part of any resulting contract.
12	Proposed amendments and qualifications
13	Labour Payment Schedule

3.0 Returnable Schedules that will be incorporated into the contract

- 3.1 Certificate of attendance of information briefing session/site inspection
- 3.2 Certificate of Authority for Signatory (Resolution by Board)
- 3.3 Schedule of Tenderers experience
- 3.4 Schedule of Sub-contractors
- 3.5 Certificate of authority for joint ventures (where applicable)
- 3.6 Schedule of Plant and equipment
- 3.7 Record of Addenda to Tender Document
- 3.8 Supplier declaration form duly completed (SDF)
- 3.9 Compulsory Enterprise Questionnaire
- 3.10 Experience of key staff in the form of Curriculum Vitae
- 3.11 Transnet SOC Limited contractual safety clauses which will form part of any resulting contract
- 3.12 Proposed amendments and qualifications.
- 3.13 Labour Payment Schedule.

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Part T2: Returnable Schedules

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CERTIFICATE OF ATTENDANCE AT INFORMATION BRIEFING SESSION/SITE INSPECTION

This is to certify that

_____ (Tenderer) of _____

_____ (Address) _____

_____ was represented by the person(s) named below at the compulsory site meeting held for all tenderers at _____ (location) on _____ (date), starting at _____ We acknowledge that the purpose of the meeting was to acquaint ourselves with the Site of the Works and/or matters incidental to doing the work specified in the tender documents in order for us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s)(Respondents) attending the meeting/site inspections:

Name: _____ Signature _____

Capacity: _____

Name: _____ Signature _____

Capacity _____

Attendance of the above persons at the meeting is confirmed by the Employer's representative, namely:

Briefing session:
Name: _____ Signature _____

Capacity: _____ Date and time _____

Site visit:
Name: _____ Signature _____

Capacity: _____ Date and time _____

RESOLUTION OF BOARD OF DIRECTORS

Name of firm _____

It was resolved at a meeting of the Board of Directors held on
_____ that

FULL NAME(S)

SIGNATURE

in his capacity of _____ is/are hereby authorised to enter into, sign
and execute and complete any documents relating to Tenders and/or Contracts for the supply
of goods and services.

Confirm: Date _____

FULL NAME _____

CHAIRMAN

FULL NAME _____

SECRETARY

Certified true copy:

SIGNED AT _____ ON THIS _____ DAY OF _____

20 _____

SCHEDULE OF THE TENDERER'S EXPERIENCE

The following is a statement of similar work successfully executed by myself/ourselves:

Employer, contact person and telephone number	Description of contract	Value of work inclusive of VAT (Rand)	Date completed
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Signed _____ Date _____

Name _____ Position _____

Tenderer _____

SCHEDULE OF PROPOSED SUBCONTRACTORS

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

If we are awarded a contract we agree that this notification does not change the requirement for us to submit the names of proposed Subcontractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us.

We confirm that all subcontractors who are contracted to construct a house are registered as home builders with the National Home Builders Registration Council.

	Name and address of proposed Subcontractor	Nature and extent of work	Previous experience with Subcontractor.
1.			
2.			
3.			
4.			
5.			

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Signed _____ Date _____

Name _____ Position _____

Tenderer _____

SCHEDULE OF PLANT AND EQUIPMENT

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

(a) Details of major Plant and Equipment that is owned by and immediately available for this contract.

Quantity	Description, size, capacity, etc.

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 acceptable.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Signed _____ Date _____
 Name _____ Position _____
 Tenderer _____

SUPPLIER DECLARATION FORM

Respondents are to furnish the following documentation and complete the Supplier Declaration Form below:

1. **Original or certified** cancelled cheque **OR** letter from the Respondent's bank verifying banking details **[with bank stamp]**
2. **Certified copy** of Identity Document(s) of Shareholders/Directors/Members *[where applicable]*
3. **Certified copy** of Certificate of Incorporation, CM29 / CM9 *[name change]*
4. **Certified copy** of Share Certificates [CK1/CK2 if CC]
5. Original or certified letterhead confirm physical and postal addresses
6. **Original or certified** valid SARS Tax Clearance Certificate [RSA entities only]
7. **Certified copy** of VAT Registration Certificate [RSA entities only]
8. A signed letter from your entity's auditor or accountant confirming most recent annual turnover figures or certified BBBEE certificate
9. **Certified copy** of valid Company Registration Certificate *[if applicable]*

Note: No contract shall be awarded to any South African Respondent whose tax matters have not been declared by SARS to be in order.

Note: No agreement shall be awarded to any Respondent whose tax matters have not been declared by SARS to be in order.

Company Trading Name						
Company Registered Name						
Company Registration Number Or ID Number If A Sole Proprietor						
Form of entity	CC	Trust	Pty Ltd	Limited	Partnership	Sole Proprietor
VAT number (if registered)						
Company Telephone Number						
Company Fax Number						
Company E-Mail Address						
Company Website Address						

Bank Name		Bank Account Number	
Postal Address		Code	
Physical Address		Code	
Contact Person			
Designation			
Telephone			
Email			
Annual Turnover Range (Last Financial Year)	< R5 Million	R5-35 million	> R35 million
Does Your Company Provide	Products	Services	Both
Area Of Delivery	National	Provincial	Local
Is Your Company A Public Or Private Entity	Public	Private	
Does Your Company Have A Tax Directive Or IRP30 Certificate	Yes	No	
Main Product Or Service Supplied (E.G.: Stationery/Consulting)			
BEE Ownership Details			
% Black Ownership	% Black women ownership	% Disabled person/s ownership	
Does your company have a BEE certificate	Yes	No	
What is your broad based BEE status (Level 1 to 9 / Unknown)			
How many personnel does the firm employ	Permanent	Part time	
Transnet Contact Person			

Contact number	
Transnet operating division	

Duly Authorised To Sign For And On Behalf Of Firm / Organisation			
Name		Designation	
Signature		Date	

Stamp And Signature Of Commissioner Of Oath			
Name		Date	
Signature		Telephone No.	

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COMPULSORY ENTERPRISE QUESTIONNAIRE

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: Record in the service of the state

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

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

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

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

*insert separate page if necessary

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 or has been within the last 12 months been in the service of any of the following:

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

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



--	--	--	--	--

*insert separate page if necessary

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

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

Signed _____ Date _____
Name _____ Position _____
Enterprise name _____

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CURRICULUM VITAE OF KEY PERSONNEL

Name:		Date of birth:	
Profession:		Nationality:	
Qualifications:			
Professional registration number:			
Name of employer (firm):			
Current Position:		Years with the firm:	
Employment record: (list in chronological order starting with earliest work experience)			
Experience record pertinent to required service			
Certification:			
I, the undersigned, certify that to the best of my knowledge and belief, this data correctly describes me, my qualifications and my experience.			
_____		_____	
<i>[Signature of person named in schedule]</i>		Date	

TRANSNET SOC LIMITED / CONTRACTORS / SUB-CONTRACTORS

CONTRACTUAL SAFETY CLAUSES WHICH WILL FORM PART OF ANY RESULTING CONTRACT

The parties agree on the following arrangements according to section 37 (2) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993) to ensure compliance by the mandatory with provisions of the Act.

- 1) That the Contractor is an "employer" in his own right as defined in section 1 of Act 85 of 1993 and that he must fulfil all his obligations as an employer in terms of the Act.
- 2) The Contractor shall comply with the requirements of Act 85 of 1993 in its entirety.
- 3) Where special permits are required, such as electrical switching, hot work permits, etc. the Contractor shall obtain them from a person designated by Transnet SOC Limited for this purpose, and all requirements of the Contractor must rigidly comply with the permit.
- 4) The Contractor shall conduct a risk assessment of the work to be performed by a competent person prior to the commencement of work, to identify risks and hazards that persons may be exposed to, analyse and evaluate identified hazards.
- 5) The Contractor shall have a documented Health and Safety Plan based on the risks and hazards identified before commencement of work.
- 6) The Health and Safety Plan shall include the following:
 - 6.1 The safety management structure to be instituted with all appointments in terms of the Act and Regulations
 - 6.2 The safe working methods and procedures to be implemented to ensure work are performed in compliance to the Act.
 - 6.3 The safety equipment, devices and clothing to be made available by the Contractor to his employees.
 - 6.4 The site access control measures pertaining to health and safety to be implemented.
 - 6.5 Control measures for ensuring that the Health and Safety Plan is maintained and monitored for the duration of the contract.
- 7) The Contractor shall ensure that all work is performed under the close supervision of a person trained to understand the hazards associated with the work performed and who has authority to ensure that the necessary precautionary measures are implemented.
- 8) The Contractor must appoint a Health and Safety Co-ordinator to liaise with Transnet SOC Limited on matters pertaining to occupational health and safety.
- 9) The appointed Safety Co-ordinator must liaise at least once a week with the* Health and Safety Section / Risk Manager /Occupational Risk Manager of Transnet SOC Limited.
- 10) The Contractor shall furnish the* Health and Safety Section/ Risk Manager/ Occupational Risk Manager of Transnet SOC Limited immediately with full particulars of any sub-Contractor which he may involve in the contract in order that the sub-

Contractor himself can be made aware of all the clauses in this contract pertaining to health and safety.

- 11) The Contractor shall stop any sub-contractor from executing work which is not in accordance with the Health and Safety Plan or which poses a threat to health and safety of persons.
- 12) The Contractor shall ensure that all his employees and visitors undergoes health and safety induction pertaining to the hazards prevalent, proof of such training must be kept on file.
- 13) In the event where the risk assessment reveals the risk relating to working from an elevated position the Contractor shall cause the designation of a competent person, responsible for the preparation of a Fall Protection Plan.
- 14) **The Fall Protection Plan shall include:**
 - 14.1 A risk assessment of all work carried out from an elevated position
 - 14.2 Procedures and methods to address all the identified risks per location
 - 14.3 Evaluation of employee's physical and psychological fitness necessary to work at elevated position.
 - 14.4 The training of employees working from an elevated position.
 - 14.5 Procedure addressing the inspection, testing, and maintenance of all fall protection equipment.
- 15) The Contractor shall advise the * Health and Safety Section / Risk Manager/ Occupational Risk Manager of Transnet SOC Limited of any hazardous situations which may arise from work being performed either by the Contractor or his sub-Contractor.
- 16) Copies of all appointments required by the act must be given to * Health and Safety Section / Risk Manager / Occupational Risk Manager of Transnet SOC Limited.
- 17) The Contractor shall ensure that a Health and Safety File is available which shall include all documentation as required by the Act, copy of his and his Sub-Contractors Risk Assessment and Health and Safety Plan.
- 18) All incidents referred to in Section 24 of the Act involving the Contractor and his Sub-Contractor on Transnet Ltd premises, shall be reported as prescribed. Transnet Ltd hereby obtains an interest in the issue of any investigation, formal inquiry conducted in terms of Section 31 and 32 of the Act into any incident involving the Contractor, his Sub-Contractor, any person or machinery under his control on Transnet Ltd premises.
- 19) ***No alcohol or any other intoxicating substance shall be allowed on Transnet Ltd premises. The Contractor shall not allow anyone under or suspected to be under the influence of alcohol or any other intoxicating substance on Transnet Ltd premises.***
- 20) Contractor to ensure its employees undergo medical surveillance as required by legislation
- 21) Contractor will be required to provide monthly safety performance reports and statistics

22) **A letter of good standing in terms of Section 80 (Employer to register with the Compensation Commissioner) of the Compensation for Occupational Injuries and Disease Act 1993 (Act 130 of 1993) must also be furnished.**

23) All clauses in the contract pertaining health and safety form an integral part of the contract and if not complied with may be construed as breach of contract.

*As applicable

Tenderer OH & S Management System Questionnaire

This questionnaire forms part of TFR tender evaluation process and is to be completed by all Tenderer's and submitted with their tender offer. The objective of the questionnaire is to provide an overview of the status of the Tenderer's OH&S management system. Tenderers will be required to verify their responses noted in their questionnaire by providing evidence of their ability and capacity in relevant matters. **TFR will verify accuracy of this information during the physical visit as part of the tender evaluation.**

The information provided in this questionnaire is an accurate summary of the company's occupational health and safety management system.		
Company Name:		
Signed:	Name:	
Position:	Date:	
Tender Description:		
Tender Number:		
Tenderer OH&S Management System Questionnaire	Yes	No
1. OH&S Policy and Management		
- Is there a written company health and safety policy? - If yes provide a copy of the policy		
- Does the company have an OH&S Management system e.g NOSA, OHSAS, IRCA System etc - If yes provide details		
- Is there a company OH&S Management System, procedures manual or plan? - If yes provide a copy of the content page(s)		
- Are health and safety responsibilities clearly identified for all levels of Management and employees? - If yes provide details		
2. Safe Work Practices and Procedures		
- Are safe operating procedures or specific safety instructions relevant to its operations available? - If yes provide a summary listing of procedures or instructions		

- Is there a register of injury document? If yes provide a copy		
- Are Risk Assessments conducted and appropriate techniques used? - If yes provide details		
3. OH&S Training		
Describe briefly how health and safety training is conducted in your company:		
- Is a record maintained of all training and induction programs undertaken for employees in your company? - If yes provide examples of safety training records		
4. Health and Safety Workplace Inspection		
- Are regular health and safety inspections at worksites undertaken? -If yes provide details		
- Is there a procedure by which employees can report hazards at workplaces? - If yes provide details		
5. Health and Safety Consultation		
- Is there a workplace health and safety committee?		
- Are employees involved in decision making over OH&S matters? - If yes provide details		
- Are there employee elected health and safety representatives? - Comments		
6. OH&S Performance Monitoring		
- Is there a system for recording and analysing health and safety performance statistics including injuries and incidents? - If yes provide details		
- Are employees regularly provided with information on company health and safety performance? - If yes provide details		
Is company registered with workmen's compensation and up to date? - If yes provide proof of letter of good standing		

- Has the company ever been convicted of an occupational health and safety offence? - If yes provide details		

Safety Performance Report

Monthly DIFR for previous months

Previous Year	No of Disabling Injuries	Total Number of employees	DIFR per month
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

DIFR = Number of Disabling Injuries x 200000 divided by number of man hours worked for the period

Signed _____
(Tenderer)

PROPOSED AMENDMENTS AND QUALIFICATIONS

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause F.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the employer's handling of material deviations and qualifications.

Page	Clause or item	Proposal

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Signed _____ Date _____
 Name _____ Position _____
 Tenderer _____



TRANSNET SOC LIMITED
(REGISTRATION No. 1990/000900/30)
TRADING AS
TRANSNET FREIGHT RAIL

LABOUR PAYMENT SCHEDULE

TENDERERS ARE REQUIRED TO COMPLETE THE FOLLOWING SCHEDULE:

DAY LABOUR (IF REQUIRED)

Skilled Hour _____
Unskilled Hour _____
Labourer Hour _____
Driver/Operator Hour _____
% Profit on Material _____

TRANSPORT AND MACHINERY

	Running	Standing
1. Light vehicle up to 1 ton	_____	_____
2. 5 Ton vehicle	_____	_____
3. 10 Ton vehicle with crane	_____	_____
4. Crane	_____	_____
5. Scaffolding	_____	_____
6. Generator	_____	_____
7. Other equipment:	_____	_____

8. Full details of any other charges:

TENDERER: _____

DATE: _____

**Part C1:
Agreement & Contract Data**

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Engineering and Construction

Short Contract

A contract between Transnet Freight Rail, A division of Transnet SOC Limited.....

and

for

The supply, install, test and commission of a 400KVA miniature substation at Welgedacht hostel.

"PREVIEW COPY ONLY"

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Site information	9
Conditions of contract	CC1

Contract Data

The Employer is

Name Transnet SOC Limited Trading as Transnet Freight Rail
Address Room 222, Cnr Paul Kruger and Minnaar Street, Pretoria.
Telephone (012) 315-2059 Fax No. (012) 315-2125
E-mail Yvonne.Scannell@Transnet.net

The works are: The supply, installation, testing and commissioning of an 11kV/400V miniature substation at Welgedacht hostel under the control of the Real Estate Management, Pretoria.

The sites are Welgedacht hostel
The starting date is TBA
The completion date is TBA
The period for reply is Two weeks
The defects date is.....52 weeks after completion of the whole of the works
The defect correction period is.....one week after notification.
The delay damages are..... R2,000 per day.
The assessment day is the.....13th of each calendar month
The retention is.....not applicable
Does the United Kingdom Housing Grants, Construction and Regeneration Act (1996) apply? No

The Adjudicator is

Name To be advised if disputes arise

Address

Telephone Fax No.

E-mail

Contract Data

The interest rate on late payment is two (2) % per annum above the prime lending rate of the Standard Bank of South Africa Ltd. As determined from time to time.

The *Contractor* is not liable to the *Employer* for loss of or damage to the *Employer's* property in excess of **R25, 000.00** for any one event.

The *Employer* provides this Insurance: **Principle Controlled Contract Works (PCI)**

The minimum amount of cover for the third insurance stated in the

Insurance Table is: **>R25, 000.00 (Limited to R10, 000.00 for any one event)**

The minimum amount of cover for the fourth insurance stated in the

Insurance Table is: **Not Applicable**

The *adjudicator nominating body* is: **The Chairman of the Association of Arbitrators (Southern Africa)**

The *tribunal* is: **Arbitration**

If the *tribunal* is arbitration, the arbitration procedure is: **The rules for the Conduct of Arbitrators of the Association of Arbitrators (Southern Africa)**

The *conditions of contract* are the NEC3 Engineering and Construction Short Contract (June 2005) and the following additional conditions

As mentioned in paragraph 1.0 (Contractual obligations)

- 1.0 CONTRACTUAL OBLIGATIONS (A)
- 1.1 This project specification covers Transnet Freight Rail's requirements for the supply, installation, testing and commissioning of an 11kV/400V miniature substation at the Welgedacht hostel under the control of the Real Estate Management, Pretoria.
- 1.2 The Contractor shall not make use of any Sub-Contractor to perform the works or parts thereof without prior permission from the Employer's deputy/Supervisor.
- 1.3 The Contractor shall ensure that a safety representative is at site at all times. All safety measures prescribed by Transnet Freight Rail – Electrical Safety Instructions and the Occupational Health and Safety Act 1993 (Act 85 of 1993) associated with working on a project of this nature shall be adhered to.
- 1.4 The Contractor shall comply with all applicable legislation and Transnet safety requirements adopted from time to time and instructed by the Employer's deputy/Supervisor / Supervisor. Such compliance shall be entirely at his own cost, and shall be deemed to have been allowed for in the rates and prices in the contract.

Engineering and Construction

- 1.5 The Contractor shall, in particular, comply with the following Acts and Transnet Specifications:-
- 1.5.1 The Compensation for Occupational Injuries and Diseases Act, No. 130 of 1993. The Contractor shall produce proof of his registration and good standing with the Compensation Commissioner in terms of the Act.
- 1.5.2 The Occupational Health and Safety Act (Act 85 of 1993).
- 1.5.3 The explosive Act No. 26 of 1956 (as amended). The Contractor shall, when applicable, furnish the Employer's deputy/Supervisor / Supervisor with copies of the permits authorising him or his employees, to establish an explosives magazine on or near the site and to undertake blasting operations in compliance with the Act.
- 1.5.4 The Contractor shall comply with the current Transnet Specification E.4E, Safety Arrangements and Procedural Compliance with the Occupational Health and Safety Act, Act 85 of 1993 and Regulations and shall before commencement with the execution of the contract, which shall include site establishment and delivery of plant, equipment or materials, submit to the Employer's deputy/Supervisor / Supervisor.
- 1.5.5 The Contractor shall comply with the current Specification for Works On, Over, Under or Adjacent to Railway Lines and near High Voltage Equipment – E7/1, if applicable, and shall take particular care of the safety of his employees on or in close proximity to a railway line during track occupations as well as under normal operational conditions.
- 1.6 The Contractor's Health and Safety Programme shall be subject to agreement by the Employer's deputy/Supervisor / Supervisor, who may, in consultation with the Contractor, order supplementary and/or additional safety arrangements and/or different safe working methods to ensure full compliance by the Contractor with his obligations as an employer in terms of the Act.
- 1.7 In addition to compliance with clause 1.5 hereof, the Contractor shall report all incidents in writing to the Employer's deputy/Supervisor / Supervisor. Any incident resulting in the death of or injury to any person on the works shall be reported immediately of its occurrence and any other incident shall be reported within 24 hours of its occurrence.
- 1.8 The Contractor shall make necessary arrangements for sanitation, water and electricity at these relevant sites during the installation of the equipment.
- 1.9 A penalty charge of **R2,000 per day** for late completion is applicable.
- 1.10 The Contractor shall supply a **site diary** (with triplicate pages). This book shall be used to record any unusual events during the period of the work. Any delays to the work shall also be recorded such as delays caused by poor weather conditions, delays caused by permits being cancelled etc. The appointed Employer's deputy/Supervisor or Supervisor must countersign such delays. Other delays such as non-availability of equipment from 3rd party suppliers must be communicated to the Employer's deputy/Supervisor or Supervisor in writing.
- 1.11 The Contractor shall supply a **site instruction book** (with triplicate pages). This book shall be used to record any instructions to the Contractor regarding problems encountered on site – for example the quality of work or the placement of equipment. This book shall be filled in by the Employer's deputy/Supervisor or Supervisor and must be countersigned by the Contractor.
- 1.12 Both books mentioned in 1.10 and 1.11 shall be the property of Transnet Freight Rail and shall be handed over to the Employer's deputy/Supervisor or Supervisor on the day of energising or handing over.

Engineering and Construction

- 1.13 All processes or the manufacture and assembly of the product components must be subjected to a quality assurance system.
- 1.14 The Contractor will assume full responsibility for assuring that the equipment utilised meet the requirements of Transnet Freight Rail for function, performance, and reliability, including purchased products from 3rd part suppliers/Manufacturers.
- 1.15 The Contractor shall prove to Transnet Freight Rail that his equipment or those supplied from 3rd party suppliers/manufacturers confirms to Transnet Freight Rail specifications.
- 1.16 The Contractor will remain liable for contractual delivery dates irrespective of deficiencies discovered during workshop inspections.
- 1.17 The successful Contractor shall provide a Gantt or a similar chart showing when the works will be done and energised. A final chart should be submitted to the Employer's deputy/Supervisor or Supervisor within 14 days after the award has been made to the successful Contractor.
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- 1.20 Where equipment offered does not comply with standards or publications referred to in the specification, Contractor shall state which standards in English or certified translation.
- 1.21 Contractors shall submit descriptive literature consisting of detailed technical specifications, general construction details and principal dimensions, together with clear illustrations of the equipment offered.
- 1.22 The Contractor shall submit equipment type test certificates as specified in the contract. These shall be in English or certified translation.

Contract Data

The Contractor's Offer

The Contractor is

Name

Address

Telephone Fax

E-mail

The percentage for overheads and profit added to the Defined Cost for people is..... %.

The percentage for overheads and profit added to other Defined Cost is..... %.

The Contractor offers to provide the Works in accordance with the conditions of contract for an amount to be determined in accordance with the conditions of contract.

The offered total of the prices (VAT Inclusive) is (total amount in words).....

Amount in figures (VAT inclusive).....R.....

Signed on behalf of the Contractor

Name

Position

Signature Date

The Employer's Acceptance

The Employer accepts the Contractor's Offer to Provide the Works

Signed on behalf of the Employer

Name

Position

Signature Date

**Part C1:
Agreement & Contract Data**

"PREVIEW COPY ONLY"

Short Contract

A contract between Transnet Freight Rail, A division of Transnet SOC Limited.....

and

for

The supply, install, test and commission of a 400KVA miniature substation at Welgedacht hostel.

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Name To be advised if disputes arise

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- 1.15 The Contractor shall prove to Transnet Freight Rail that his equipment or those supplied from 3rd party suppliers/manufacturers confirms to Transnet Freight Rail specifications.
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Contract Data

The Contractor's Offer

The Contractor is

Name

Address

Telephone Fax

E-mail

The percentage for overheads and profit added to the Defined Cost for people is.....%.

The percentage for overheads and profit added to other Defined Cost is.....%.

The Contractor offers to provide the Works in accordance with the *conditions of contract* for an amount to be determined in accordance with the *conditions of contract*.

The offered total of the prices (VAT Inclusive) is (total amount in words).....

Amount in figures (VAT inclusive)...R.....

Signed on behalf of the Contractor

Name

Position

Signature Date

The Employer's Acceptance

The Employer accepts the Contractor's Offer to Provide the Works

Signed on behalf of the Employer

Name

Position

Signature Date

**Part C2:
Pricing Data**

"PREVIEW COPY ONLY"

Part C2:Pricing Data Part C2.1: Price Instructions

2.0 PRICING INSTRUCTIONS

- 2.1 The agreement is based on the NEC Engineering and Construction Short Contract 3. The contract specific variables are as stated in the contract data. Only the headings and clause numbers for which allowance must be made in the Price list are recited.
- 2.2. Preliminary and General Requirements are based on part 1 of SANS 1921, 'Construction and Management Requirements for Works Contracts'. The additions, deletions and alterations to SANS 1921 as well as the contract specific variables are as stated in the contract data. Only the headings and clause numbers for which allowance must be made in the Price list are recited.
- 2.3. It will be assumed that prices included in the Price list are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders.
- 2.4. Reference to any particular trademark, name, patent, design, type, specific origin or producer is purely to establish a standard for requirements. Products or articles of an equivalent standard may be substituted.
- 2.5. The Price list is not intended for the ordering of materials. Any ordering of materials, based only on the Price list, is at the Contractor's risk.
- 2.6. The amount of the Preliminaries to be included in each monthly payment certificate shall be assessed as an amount prorated to the value of the work duly executed in the same ratio as the preliminaries bears to the total of prices excluding any contingency sum, the amount of the Preliminaries and any amount in respect of contract price adjustment provided for in the contract.
- 2.7. The amount or items of the Preliminaries shall be adjusted to take account of the theoretical financial effect which changes in time or value (or both) have on this section. Such adjustments shall be based on adjustments in the following categories as recorded in the Price list.
- a) An amount which is not to be varied, namely Fixed (F).
 - b) An amount which is to be varied in proportion to the contract value, namely Value Related (V).
 - c) An amount which is to be varied in proportion to the contract period as compared to the initial construction period, excluding revisions to the construction period for which no adjustment the Contractor is entitled to in terms of the contract, namely Time Related (T).
- 2.8. The following abbreviations are used in the Price list:
- | | | |
|------|---|-----|
| Sum | = | sum |
| Each | = | ea |

meter = m

- 2.9 The prices and rates in these Price list are fully inclusive prices for the work described under the items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the scope of work and shall cover liabilities and obligations set forth or implied in the Contract data, as well as profit.
- 2.10 Where the scope of work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered for such items.
- 2.11 Where no quantity has been provided against an item in the Price list, the Contractor shall use their discretion and provide the quantity.
- 2.12 The short descriptions of the items of payment given in these Price list are only for purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
- 2.13 Contractor shall ensure that provision (financial as well as time) for excavations in a range of soil types is made for in their tenders.
- 2.14 For each item in the Price list, including Preliminaries, the Contractor shall provide in the appropriate column the portion of the tendered sum (inclusive of labour and material) which has been sourced locally (Republic of South Africa).
- 2.15 The Contractor shall provide information related to imported content, i.e. equipment to be imported, value and applicable exchange rates. This information shall be provided as an Annexure to the Price list.
- 2.16 The total in the Price list shall be exclusive of VAT.
- 2.17 Contractors shall duly fill in the attached 'Price list'. The prices shall be fixed for the duration of the contract and no escalation will be allowed. Items not reflected in the 'Price list', but covered in the particular specification or agreed at site meetings, shall be added to the 'Price list' by the Contractor and quoted for accordingly.
- 2.18 All invoices must reflect the following information:
- Company letter head
 - VAT registration number
 - Contract number
 - Job number / reference number
 - Description of the work to be performed plus detailed address where the work was performed.
 - Travelling time
- 2.19 All invoices to be verified by Transnet Freight Rail Supervisor.
- 2.20 INVOICE INFORMATION
All invoices must reflect the following information: -

- Purchase order number ~ _____
- Description of work performed plus detailed address where work was performed
- All invoices to be verified by TFR Supervisor and stamped
- Company's VAT number and Transnet Vat number 4720103177.
- Transnet Freight Rail full postal address.

2.21 For technical and delivery matters, contact the Employer's deputy/Supervisor, Transnet Freight Rail, appointed as the Transnet technical representative, Zacharia Mangena, cell No. 083 280 6173 or tel. no. 012 315 2117.

2.22 PRICE STRUCTURE AND PAYMENT

Only invoices with the organization's letter head and correct VAT registration number will be accepted for payment. Payment will be effected in accordance with Transnet Freight Rail's procurement terms and conditions.

2.23 VAT

Rates shall be quoted exclusive of Value Added Tax. Provision is made in the Summary of Prices for the lump-sum addition of Value Added Tax.

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Part C2: Pricing Data
Part C2.2: Activity list

Ite	Description	Qty	Unit	Rate	Price
The supply, install, test and commission of an 11kV/400V miniature substation at Welgedacht hostel.					
1	Dismantle, remove and transport old equipment from site to Koedoespoort Depot	sum	1		
2	Supply and install a 400kVA miniature substation (design and manufacture in accordance with the requirements of SANS1029)	Sum	1		
3	11kV supply cable reroute and termination	Sum	1		
4	LV side cable reroute and termination	sum	1		
5	Earth connection in accordance with the requirements of SANS10200 and SANS 10292	sum	1		
6	Trenching and cable routers	Sum	1		
7	Construction of a concrete slab 4m ² and 400mm above the natural ground level (Extension of the transformer base).	Sum	1		
8	Miscellaneous	Sum	1		
9	Testing and Commissioning of miniature substation	Sum	1		
10	Making good	Sum	1		
A	Subtotal (Excl. VAT) =				R
B	VAT (14%) of A =				R
C	Gross Total (A+B) =				R

Completion period in working days (Excl. Sat, Sun & PPH): _____

**Part C3:
Works information**

"PREVIEW COPY ONLY"

Part C3: Contract Data**Part C3.1: Works Information****3.1 WORKS INFORMATION:****3.1.1 SCOPE:**

This part of the specification covers the manufacture, supply, install, test and commission of a miniature substation 11KV/400V, 3Ø, Delta-Star, ON/AN, 400kVA at Welgedacht hostels.

3.1.1.1 The work is to be executed in accordance with SANS 1029 and SANS 1030.

3.1.2 CONSTRUCTION:

3.1.2.1 The miniature substation shall comprise of three compartments, the medium voltage (MV), transformer and the low voltage (LV) compartment, all flanged and bolted together and fixed to a common frame suitable for mounting on a concrete foundation. The design of the miniature substation shall be such that it is suitable for outdoor installation in places accessible to the public without requiring additional fencing. The only acceptable miniature substation shall be as specified in SANS 1029 and SANS 1030 depending on the design requirements.

3.1.2.2 The medium voltage and the low voltage compartments shall be manufactured from folded steel and shall be adequately sized to take the equipment specified below. The compartments shall be fitted to the flanged transformer so that seen from the front of the substation the MV compartment is situated to the left, the LV compartment to the right of the substation and the transformer in the back part of the LV compartment but bordering the MV compartment.

3.1.2.3 A common inclined roof shall be provided over the whole substation providing adequate ventilation, shielding against rain and a run-off for water. The roof shall be secured in position to prevent it from being blown off under adverse weather conditions and it shall be detachable from the inside of the compartments only as to make the fixing tamperproof. The MV and LV compartments shall be covered on top with a sheet steel lid having an opening with pipe insert for aeration of the compartments into the roof space formed by the common roof and the covers of the compartments.

3.1.2.4 The double roof over the compartments is intended to prevent excessive heating up of the compartments exposed to the direct radiation of the sun and to prevent dust from penetrating through the tops of the compartments. The construction shall generally conform to the relevant standard specification issued by SANS 1029 and SANS 1030.

3.1.3 SPECIFIC REQUIREMENTS FOR CONSTRUCTION:

(a) System nominal voltage: Specific to design but in accordance with SANS 1029 and SANS 1030 and the Quality of Supply Code

(b) Outer cladding: Mild steel. Note coastal or environmental Specifications are to be adhered to as stipulated by the Supply Authority and Engineer.

(c) Doors: Only one door for the MV-compartment and one door for the LV-compartment shall be equipped for padlocking from the outside. All other doors shall be opened from the inside of the miniature substation after opening one of the above pad-lockable doors. All door hinges shall be concealed. A metal cover of 4.5mm thickness shall be fitted over each locking mechanism to protect the padlock against vandalism.

(d) Final finish: in accordance with SANS 1091

3.1.4 MV COMPARTMENT EQUIPMENT:

3.1.4.1 A compact, metal clad, totally enclosed 3 way ring main unit in accordance with SANS 1874 shall be provided in the MV compartment. The switchgear shall comprise of two load break isolators, for the incoming and outgoing cables and one fuse T-off with fuses rated for the protection of the transformer. The unit shall be installed in the compartment and the connections to the transformer completed.

3.1.4.2 All shrouds and terminals shall be provided suitable for terminating the incoming and outgoing cables. One operating handle shall be supplied with the switchgear unit and a suitable bracket provided at below the ring main unit to accommodate the handle. A spare set of fuses shall be provided and accommodated in a bracket on the inside of the MV door.

3.1.4.3 A copper earth bar shall be provided in the MV compartment to which all exposed metal parts shall be earthed. Provision must be made for connecting to the earth bar, the substation earth, screens of the cables and the earth bar of the LV compartment.

3.1.5 SPECIFIC REQUIREMENTS FOR MV COMPARTMENT:

a) Cable fixture:

i) Type of MV cable: Heat shrink XLPE / PILC type for up to Termination conductor size applicable to specifications.

ii) Cable clamping: Required at a level 600mm below MV facility switch terminals, on hot-dip galvanized bracket supplied with mini-substation.

b) Special transformer protection: 230V 50Hz shunt trip unit required on MB tee-off switch, controlled by a contract on an

oil temperature indicator and thermostat, mounted in a pocket into transformer tank. Indicator/thermostat to be accessible from LV compartment, and contact operating temperature to be adjustable between 60°C and 100°C, according to an easily readable scale. Cable between thermostat and shunt trip to be 6,0mm² unarmored PVC copper conductor cable run in protective sections of straight conduit and protected by means of 10A HRC fuse mounted directly on LV busbars. Label: "Shunt trip fuse behind" to be fitted on front panel over LV switchgear.

c) Shunt-trip pushbutton:

A panel mounting push button with bezel which will trip the transformer switch via the shunt-trip coil shall be provided in the LV-compartment. This push button must be easily accessible and labelled: "Push to trip Transformer Tee-off Switch".

d) MV Switch:

A ring main unit (SF6) with fuses for the transformer tee-off, with shunt trip. Spare set of fuses to be provided.

e) Earth fault indicating relay:

Split-core CT and electrically reset earth fault indication relay

3.1.6 LV COMPARTMENT EQUIPMENT

3.1.6.1 The equipment to be provided in the LV compartment shall be rated and wired as shown as single line diagram on the drawing forming part of the detail specification. All equipment shall be mounted on a mounting plate fixed to a free standing frame in the compartment and shall be complete with the necessary connections, fuses, instruments, links, supports, gland plates ready drilled and the necessary sundries including all integral wiring.

3.1.7 SPECIFIC REQUIREMENTS FOR LV COMPARTMENT:

3.1.7.1 LV-Compartment Equipment:

Note: Entire LV compartment to be safe-to-touch when cover plate panel over LV switchgear is fitted.

The LV Compartment must be designed to house the following breakers:

1. 1 x 3p x 500A, MAIN Circuit Breaker
2. 3 X 3p x 150A, Kiosk A, B & C
3. 1 x 3p x 200A, Spare
4. 2 x 3p x 60A, Spare
5. 3 x 1p x 60A, Lighting

6. A photocell, mounted in LV compartments behind polycarbonate translucent window with extruded metal protective cover, to control streetlight contactor, protected by means of 6A HRC fuse in totally enclosed fuse.
7. 15A by pass switch, to by-pass photocell for control of street lighting contactors.
8. Galvanised P100 uni-strut channel for termination of LV cables.
9. Set of three current transformers, sensing total transformer current, class1, to control ammeters, ratio.
10. Set of three instantaneous indicating and thermal maximum demand combination ammeters with built-in saturation CT, integrating over 15 minutes, ATW "slip-in scale" 96mm type, for operating from 5A CT secondary, scaled.
11. One voltmeter, ATW "slip-in-scale" 96mm completes with selection switch to select R-Y, R-B, R-N, Y-N and B-N connected via 6A HRC fuses connected directly to busbar.
12. KWh and maximum demand meter, programmed for CT ratio.
13. 6A HRC for earth fault indicating relay in LV compartment, complete with internal unarmoured cable connection (2,5mm²) to relay position, run via straight section of galvanized conduit.
14. Label for all MV and LV switchgear, one per item of equipment as well as labels for MV and LV sections.

3.1.8 CIRCUIT BREAKERS:

3.1.8.1 The main and feeder circuit breakers connected to the busbars shall comply with SANS156. The circuit breakers shall be suitable for operation on 400V/250V and the minimum rupturing capacity shall be 15kA. The trip characteristics shall be in accordance with SANS156.

3.1.8.2 Note: Strict adherence to SANS1029 is required in the construction and specifications of the following items, busbar and earth bar, gland plates, equipment front panel, accessibility to equipment, transformer, cable termination as well as erection of the miniature sub-station. Conformance is also required in the following items:

- Painting (Sans 10064),
- Labels and notices, and
- Information and drawings.

3.1.9 CONCRETE SLAP:

3.1.9.1 The concrete slab of the dimensions listed below shall be constructed such that the substation plinth shall reach 400mm above the surrounding natural ground level.

- : Slap dimension: height 400mm
- : Length 2.5m
- : Wide 1.6m
- : Total Area 4m²

- 3.1.10 EARTHING:
- 3.1.10.1 The neutral point of the low voltage system of the transformer shall be solidly earthed to achieve an earth resistance not exceeding one ohm (Ω). The transformer frameworks and all the non-current carrying metal parts of the transformer shall be earthed similarly to achieve an earth resistance not exceeding one ohm (Ω).
- 3.1.11 INSPECTION, TESTING AND COMMISSIONING:
- 3.1.11.1 Inspection and acceptance test:
- 3.1.11.1.1 The whole of the plant and equipment to be supplied under the tender shall be subjected to inspection and acceptance test by the Employer's Deputy and his officers prior to installation. The approval by the Employer's Deputy of the results of any such inspection or test shall not prejudice the right of the Employer's Deputy to reject the plant if it fails to comply with the specification when erected or to give complete satisfaction in service within the defect liability period.
- 3.1.12 SITE TESTING:
- 3.1.12.1 On completion of the installation work on site the Electrical contractor shall at his own expense arrange for all the necessary tests to be carried out on the equipment by either a manufacturer's Technician or a service Engineer as approved by the Electrical Engineering Practice. The test to be carried out shall be as prescribed in the relevant South African standard code of Practice for high voltage transformers. In the event the installation fails to pass any of these tests the Electrical contractor shall take such measures as are necessary to remedy the defects and the installation shall not be considered as completed until all such tests have been passed. The tests to be carried out by the Electrical contractor shall consist of the following tests as the minimum:-
- (a) 2000V Insulation resistance tests
 - (b) 24kV AC pressure test for 1.0 minute.
 - (c) Testing and setting of safety devices and measuring gauge.
 - (d) Any other tests as recommended by the manufacturer and the supplier.
- 3.1.12.2 The Employer's Deputy reserves the right to be present at all tests and the Electrical Contractor shall give at least one week notice in writing to the Employer's Deputy for this purpose.
- 3.1.13 COMMISSIONING:
- 3.1.13.1 On successful testing of the complete installation the Electrical Contractor shall arrange to commission the equipment in the presence of the Employer's Deputy on a date decided by the Employer's Deputy.

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- 3.1.14 REJECTION OF PLANT:
- 3.1.14.1 Any item of plant or component which fails to comply with the requirements of this specification in any respect whatsoever at any stage of , test, erection or on completion at site within the defect liability period of the contract may be rejected by the Employer's Deputy either in whole or in part as he considers necessary.
- 3.1.14.2 After adjustment or modification if so directed by the Employer's Deputy the Electrical Contractor shall submit the item for further inspection and or test. Plant for component with defects of such nature that, in the opinion of the Employer's Deputy the requirements of this specification cannot be fulfilled by adjustment or modification shall be replaced by the Electrical Contractor at his own expense and to the satisfaction of the Employer's Deputy.
- 3.1.15 OTHER ITEMS TO BE SUBMITTED WITH THE TENDER:
- 3.1.15.1 Manufacture's Catalogue and Drawings:
- 3.1.15.1.1 Manufacture's catalogues and drawings giving detailed information on the general arrangement of the transformer overall dimensions, weight, general construction, position of cables, grouting bolts, loading on foundation (if any), trenching details, technical specification and other useful details shall be submitted together with the tender.
- 3.1.16 RECOMMENDED SPARES:
- 3.1.16.1 The Electrical Contractor shall submit with his tender separate schedule of spares recommended by the supplier of the equipment. The schedule shall contain the price and delivery period of each items of the spares recommended. The Electrical Contractor shall also recommend the quantity of each item to be stored for the purpose of maintenance. The price and the purchase of all or any of the spares listed shall be at the option of the Employer's Deputy. The prices quoted shall be valid for acceptance during the contract period (extended if applicable) of the project.
- 3.1.16.2 All spare parts shall be original and fully interchangeable with the corresponding parts used in the main items of the equipment and with each other without having to resort to machining or additional fittings at site. All spares shall be finished, protected packed and labelled in suitable manner to prevent deterioration during prolonged storage in tropical climate.
- 3.1.17 WORKING DRAWING, INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTION:
- 3.1.17.1 Working Drawings:
- 3.1.17.1.1 Within a reasonable time after the award of the tender or such shorter period as may be required by the Employer's Deputy, the Electrical Contractor shall

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submit to the Employer's Deputy for his approval four sets of the details of the layout of the transformer in the transformer space provided. The drawings submitted are to be modified if necessary as requested by the Employer's Deputy and resubmitted for final approval. It is to be understood however, that approval of the drawing will not exonerate the Electrical Contractor from any responsibility in connection with the work.

- 3.1.18 INSTALLATION OPERATION AND MAINTENANCE INSTRUCTION:
- 3.1.18.1 As soon as the general arrangement and details of the equipment to be supplied have been finalised and before the delivery of the equipment, the Electrical Contractor shall submit to the Employer's Deputy two copies of detailed installation, operation and maintenance instructions in respect of the equipment to be supplied.
- 3.1.18.2 The instructions shall cover the main as well as any associated equipment. For this purpose manufacture's standard brochures will be accepted provided that they refer particularly to the equipment to be supplied and are free from extraneous matter. The instruction shall include essential details, drawings and sketches of the equipment installation, operation and maintenance techniques and make mention of specials material where used and include schedules of recommended lubricants etc.
- 3.1.18.3 Each of the above two sets of manuals submitted shall be in a stiff cover ring file and with titles to the satisfaction of the Employer's Deputy. The cost of these manuals shall be deemed to be included in the tender price.
- 3.1.19 SERVICE AND MAINTENANCE:
- 3.1.19.1 During the defects liability period the Electrical Contractor shall be responsible for the service and maintenance work for the complete installation. All works shall be carried out by the competent personnel. All labour, material, tools and parts necessary to rectify the defects due to manufacturing/ installation faults shall be supplied/executed at the Electrical Contractor's costs.
- 3.1.19.2 The servicing and maintenance to be performed shall include but not be limited to the following:-
- (a) Replacing or making good all components of the transformer and ancillary equipment etc.
 - (b) Replacing and making good all loose and burnt cables and terminations, all mechanical support and linkage, earth electrodes, earth chambers and covers, conduits trunkings etc.
 - (c) Making good any damage to roads, building drains cables, pipes, concrete areas, paved areas etc. which had not been properly made good arising out of his work.
 - (d) All other works as deemed necessary by the Electrical Contractor.

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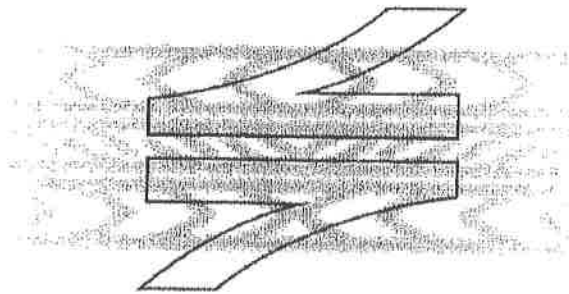
- 3.1.19.3 All works shall be carried out as soon as the Electrical Contractor has been informed by the Employer's Deputy or the occupants and shall be completed within a reasonable time except under additional general conditions. If the Electrical Contractor fails to comply with the above requirements, the Employer's Deputy reserves the right to engage another party to carry out the works, in which case the Electrical Contractor shall be responsible for all the expenses incurred.
- 3.1.20 AS INSTALLED DRAWINGS MANUALS AND TOOLS:
- 3.1.20.1 The drawings, manuals, tools etc. as mentioned below shall be provided whether or not they are separately itemised in the price list of the tender document. The cost of all these drawings, manuals, tools etc. is deemed to be included in the tender price.
- 3.1.21 AS INSTALLED DRAWINGS:
- 3.1.21.1 Within one Calendar month after practical completion of the project, one set true to scale duplicates and four sets of prints for each of the following drawings shall be submitted.
- (a) Site Plan
 - (b) Schematic wiring Diagrams and Electrical layout Plans
 - (c) Layout Plans of cable routes and earthing points with reference to easily recognisable buildings and structures.
- 3.1.21.2 These drawings shall be properly stencilled and shall have at the lower right hand corner the Electrical Contractor's name and address, date of commissioning, scale, drawing number.
- 3.1.21.3 If the drawing submitted are not acceptable by the Employer's Deputy the Electrical Contractor shall amend and resubmit the drawings within two weeks from the date of return of the drawings.
- 3.1.22 MANUALS:
- 3.1.22.1 Four sets of the following manuals and documents of the transformer and ancillary equipment shall be supplied:-
- (a) Installation Manual.
 - (b) Operation Manual.
 - (c) Service and Maintenance Manual.
 - (d) Parts List.
 - (e) Product Data and Catalogues
 - (f) Test Certificates
- 3.1.22.2 The installation, operation, service and maintenance manuals shall be the same as those described above and shall be in a stiff covered ring file.

Part C3: Contract Data

Part C3.2: Particular Specification

- 3.1 Particular Specification
- 3.2.1 SPECIFICATIONS
- 3.2.1.1 South African National Standards:
- 3.2.1.1.1 SANS 780 (SABS 780) (2009) (2009-04-09): requirements for single-phase and three-phase distribution transformers of the oil-immersed type.
- 3.2.1.1.2 SANS 1091: National colors standards for paint
- 3.2.1.2 Transnet Freight Rail specifications:
- 3.2.1.2.1 CEE.0045.2002/1 Painting of steel Components of Electrical Equipment.
- 3.2.1.2.2 CEE.0183.2002 Hot dip galvanising and painting of electrical equipment.
- 3.2.1.2.3 CEE.0224.2002 Drawings, catalogues, instruction manuals and spares list for electrical equipment supplied under contract.

NOTE: Any other specifications referenced in the above mentioned specification, will be for information purposes and may be provided on request.



SPOORNET

A division of Transnet limited

**TECHNICAL
RAILWAY ENGINEERING
SPECIFICATION**

**PAINTING OF STEEL COMPONENTS OF
ELECTRICAL EQUIPMENT**

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Technical: Maintenance (Infrastructure)
Technical: Maintenance

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1.0 SCOPE

This specification covers the surface preparation, paint systems and painting of steel components of electrical equipment.

2.0 REFERENCES AND GLOSSARY

The following standards and specifications are referred to herein:

2.1 South African Bureau of Standards: -

SABS 064 : Code of Practice for the Preparation of Steel Surfaces for Coating.

SABS 1091 : National Colour Standards for Paint.

2.2 Trade names :

OptiDegreaser

OptiPrime^{Aqua}

Noxyde

2.3 Classification of level of surface degradation:

RE1 – 0.05% of surface rusted

RE2 – 0.5% of surface rusted

RE3 – 1.0% of surface rusted

RE4 – 3.0% of surface rusted

RE5 – 8.0% of surface rusted

3.0 METHOD OF TENDERING

3.1 Tenderers shall indicate clause by clause compliance or non-compliance with the specification. This shall take the form of a separate document listing all the specification clause numbers indicating the individual statement of compliance or non-compliance. Tenderers to elaborate on their response to a clause can use this document.

4.0 SURFACE PREPARATION

4.1 NON-GALVANISED STEELWORK

4.1.1 New Steelwork

SURFACE PREPARATION (Read: NOTES and SPECIAL INSTRUCTIONS)	PRODUCT REQUIREMENTS & APPLICATION (See Variations for Specific Environmental Conditions)
<ul style="list-style-type: none"> ➤ Sandblast to a standard of Sa2 to remove mill scale and/or flash rust ➤ Remove dust with <u>clean</u> compressed air (Check air for oil contamination) 	<ul style="list-style-type: none"> ➤ Apply a stripe coat to edges, bolts, crevices, nuts and rivets. ➤ Apply one thick coat of Noxyde to the entire structure with contrasting color. ➤ Apply a final thick coat of Noxyde at a consumption rate of minimum 400g/m²

4.1.2 Previously Coated Steelwork

4.1.2.1 COATING START FAILING TO A LEVEL OF RE 2

<ul style="list-style-type: none"> ➤ Test for adhesion (refer to supplier) ➤ Degrease thoroughly with OptiDegreaser ➤ Hydro Blast complete substrate using a rotating nozzle and minimum 250 bar at the nozzle 	<ul style="list-style-type: none"> ➤ Apply a stripe coat to edges, bolts, nuts and rivets and fill crevices. ➤ Apply one coat of Noxyde to entire substrate in a contrasting color
---	--

4.1.2.2 COATING FAILURE AND RUSTING TO A LEVEL OF RE 4

<ul style="list-style-type: none"> ➤ Remove all visible traces of rust by mechanical means ST2 (chip/grind/sand) OR shotblasting /spotblasting) ➤ Degrease thoroughly with OptiDegreaser ➤ Hydro Blast complete substrate using a rotating nozzle and minimum 250 bar at the nozzle. 	<ul style="list-style-type: none"> ➤ Apply a thick coat of Noxyde to the de-rusted areas, edges, bolts, nuts and rivets and fill crevices ➤ Apply one coat of Noxyde at a consumption rate of minimum 400g/m² to the entire substrate using a contrasting color.
---	---

4.1.2.3 BITUMEN COATED

<ul style="list-style-type: none"> ➤ Remove all visible rust and loosely adhering bitumen coating by means of chipping and scraping (ST2) ➤ Degrease thoroughly with OptiDegreaser ➤ Hydro Blast complete substrate using a rotating nozzle and minimum 250 bar at the nozzle. 	<ul style="list-style-type: none"> ➤ Apply a thick coat of Noxyde to the de-rusted areas, edges, bolts, nuts and rivets and fill crevices ➤ Apply two coats of Noxyde at a consumption rate of minimum 400g/m² per coat to the complete substrate using contrasting colors
---	---

4.1.2.4 BADLY RUSTED STEEL WITH PITTING & CRUST FORMATION TO RE 5

<ul style="list-style-type: none"> ➤ 1. Degrease thoroughly with OptiDegreaser ➤ 2. Hydro Blast complete substrate using a spinor tip and minimum 250 bar at the nozzle ➤ 3. Shotblast/sandblast complete substrate giving particular attention to bolts nuts rivets and crevices. Sa2 ➤ 4. Dedust 	<ul style="list-style-type: none"> ➤ Apply a first thick coat of Noxyde to the entire substrate ➤ Apply a stripe coat to edges, bolts, nuts and rivets and fill crevices using a contrasting color ➤ Apply a final coat of Noxyde at a consumption rate of minimum 400g/m²
--	--

4.2 GALVANISED STEELWORK

4.2.1 NEW AND WEATHERED GALVANISING WITH A SMOOTH GLOSSY FINISH

<ul style="list-style-type: none"> ➤ Degrease thoroughly with OptiDegreaser ➤ Rinse down with copious quantities of potable water 	<ul style="list-style-type: none"> ➤ Apply one thin coat of OptiPrime^{AG} (100 micron wet/35 micron dry) ➤ Apply a stripe coat of Noxyde to edges, bolts, nuts and rivets and fill crevices ➤ Apply two coats of Noxyde at a consumption rate of minimum 400g/m² per coat to the complete substrate using contrasting colors
---	---

4.2.2 WEATHERED GALVANISING

4.2.2.1 White rust (zinc oxide)

<ul style="list-style-type: none"> ➤ Degrease thoroughly using OptiDegreaser - ensure that all traces of "white rust" are removed ➤ Rinse down with copious quantities of potable water 	<ul style="list-style-type: none"> ➤ Apply one thin coat Noxyde ➤ Apply a stripe coat of Noxyde to edges, bolts, nuts and rivets and fill crevices ➤ Apply a final coat of Noxyde at a consumption rate of minimum 400g/m² per coat to the complete substrate using a contrasting color
---	---

4.2.2.2 Combination of red rust (iron oxide) and white rust (zinc oxide)

<ul style="list-style-type: none"> ➤ Remove all traces of red rust ➤ Degrease thoroughly using OptiDegreaser - ensure that all traces of "white rust" are removed ➤ Rinse down with copious quantities of potable water 	<ul style="list-style-type: none"> ➤ Apply a thick coat of Noxyde to the de-rusted areas, edges, bolts, nuts and rivets and fill crevices ➤ Apply a final coat of Noxyde at a consumption rate of minimum 400g/m² per coat to the complete substrate using a contrasting color
--	---

NOTES and SPECIAL INSTRUCTIONS:		
<p>1 Sand or Grit-blasting</p> <ul style="list-style-type: none"> a) Always use clean, non-recycled grit b) Always use fine or extra fine grit c) Always use oil free air d) Always use a moisture trap e) Dedust 	<p>2 Degreasing:</p> <ul style="list-style-type: none"> a) Use only OptiDegreaser b) Dilute according to Instructions - see data sheet c) Always follow up with hydro-blasting to remove all chemical residues 	<p>3 Hydro-blasting:</p> <ul style="list-style-type: none"> a) Always use clean potable water b) Use a rotating nozzle and ensure a pressure of minimum 250 bar at the nozzle c) Remove ALL traces of dirt and any form of salt contamination and residues of the degreasing agent d) Concentrate in crevices and other similar "collection" areas

5. PRODUCT APPLICATION

5.1 METHOD OF APPLICATION

OptiPrime ^{AG}	Noxyde
<p>Temperature-Min 5 °C Relative humidity-Max 80% R.H.</p> <ul style="list-style-type: none"> ➤ Apply by brush, lacquer roller or airless spray using a no. 11 nozzle ➤ Apply one thin coat only - 100 micron wet = 35 micron dry (DFT) ➤ Small parts can be dipped - dilute with 10% water for dipping 	<p>Temperature-Min. 8 °C, Max. 55 °C Relative Humidity-Max 80% R.H.</p> <ul style="list-style-type: none"> ➤ Apply by brush, roller or airless spray ➤ For airless spray applications refer to "Tips for airless spraying of Noxyde"

5.2 DRYING TIME AND OVERCOAT PERIODS

<ul style="list-style-type: none"> ➤ Do not overcoat within 12 hours ➤ Wash down with clean potable water (100 bar) before over coating to remove dust or any other form of intermediate contamination 	<ul style="list-style-type: none"> ➤ Drying time is dependant on ambient conditions and can vary from a few minutes (in dry windy conditions) to a few hours (in humid shaded conditions) ➤ Overcoat as soon as possible to avoid contamination of previous coat ➤ Wash down with clean potable water (100 - 150 bar) before over coating if danger of contamination exists or if left more than 4 hours before over coating
--	---

5.3 CURING TIME

n/a	<ul style="list-style-type: none"> ➤ 7 - 14 days to "full cure". During this period the product is prone to mechanical damage - the longer time it is allowed to cure, the tougher it becomes
-----	--

5.4 DRY FILM THICKNESS (DFT) READINGS

35 micron	<ul style="list-style-type: none"> ➤ Severe coastal & marine environments (in the spray zone) - TWO stripe coats & overall minimum DFT of 400 micron ➤ Normal coastal environment (1.5 km from the coast line) - a single stripe coat & overall minimum DFT of 400 micron ➤ Non coastal high rainfall areas, in the immediate viciniate of rivers, dams, lakes, etc., and in industrial areas with high levels of chemical pollution - a single stripe coat & overall minimum DFT of 400 micron ➤ Dry non aggressive environments - a single stripe coat & overall minimum DFT of 250 micron <p>NOTE: DFT readings can only be taken after 72 hours</p>
-----------	---

5.5 Notwithstanding the above requirements, all surfaces shall be cleaned according to the appropriate method described in SABS 064 for the particular surface to be cleaned, the contamination to be removed and the primer to be applied.

5.6 Blast cleaning of components shall be in accordance with clause 4.3 of SABS 064 to a degree of cleanliness of at least Sa 2 for inland exposure components and Sa 2 ½ for coastal exposure components. See Table 1 of SABS 064 for the appropriate profile.

5.7 Sheet metal that cannot be blast cleaned shall be cleaned by pickling according to clause 4.6 of SABS 064.

5.8 Components that will be powder coated shall be cleaned and prepared by the surface conversion process according to clause 5 of SABS 064 to a medium weight classification of table 2 of that specification.

5.9 Oil and accumulated dirt on steel components where no rusting is present shall be removed according to clause 3 of SABS 064.

6.0 PAINT SYSTEM

A choice of two systems is available to suit the contractors equipment.

6.1 Noxyde paint system

1st coat: OptiPrime^{Aqua}

Wet film thickness: 100 micrometers. Dry film thickness: 35 micrometers.

2nd coat: Noxyde Topcoat

Dry film thickness: 165 micrometers @ 400g/m².

6.1.1 Paint application:

6.1.1.1 The primer and paint is normally applied by brush at supply viscosity (no reducer required).

6.1.1.2 The practical spreading rate of the primer and paint is a function of the ambient temperature, wind velocity and the application technique, but will generally fall in the range of 400g/m² in low to mild corrosive areas, and 500g/m² in severely corrosive areas.

6.1.1.3 Once the applied coat of primer/paint is touch dry, the next coat of paint may be applied.

6.1.1.4 If painted steelwork is to be bolted onto structures, it is imperative that the paint has been allowed to hard dry before the steelwork is bolted onto structures. This is to prevent the soft paint being damaged when tightening the bolts securing the steelwork to the structures.

6.2 Powder Coating System.

The powder-coating process shall be in accordance with SABS 1274 type 4: Corrosion-resistant coatings for interior use and using the thermosetting type high gloss coatings.

7.0 COATINGS AND WORKMANSHIP

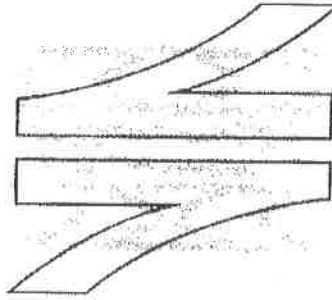
7.1 All specified coatings shall be applied according to the relevant specification and the manufacturer's instructions shall be followed.

7.2 Coatings shall not be applied under conditions that may be detrimental to the effectiveness of the coating or the appearance of the painted surface.

7.3 When examined visually, the finished products shall have a uniform appearance and shall show no sign of damage. Damaged areas shall be repaired coat for coat to obtain the desired finish.

TENDERER'S SIGNATURE.....

DATE.....



SPOORNET

A division of Transnet limited

**TECHNICAL
RAILWAY ENGINEERING
SPECIFICATION**

**HOT DIP GALVANISING AND PAINTING OF
ELECTRIFICATION STEELWORK**

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Technical

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1.0 SCOPE

- 1.1 This specification covers the hot dipped galvanising and painting of electrification steelwork.
- 1.2 The extent of work includes galvanising and painting of steelwork consisting of universal column masts with welded on bases up to 14 m in length and small part steelwork consisting of channel, angle and flat iron fittings, welded assemblies and tubular cantilevers.

2.0 REFERENCES

- 2.1 The following publications (latest edition) are referred to herein:

SABS 763: Hot Dipped Galvanising.

SABS 1091: National Colour Standards for Paint.

3.0 METHOD OF TENDERING

- 3.1 Tenderers shall indicate clause by clause compliance or non-compliance with the specification. This shall take the form of a separate document listing all the specification clause numbers indicating the individual statement of compliance or non-compliance.
- 3.2 The Schedule of Requirements, Quantities and Prices, Appendix 1 to this specification shall be fully completed by Tenderers. Failure to submit a fully completed sheet may preclude a tender from further consideration.

4.0 APPENDICES

The following appendices form an integral part of this specification:

Appendix 1: Schedule of Requirements, Quantities and Prices.

5.0 GALVANISING OF STEELWORK

- 5.1 The steelwork must be cleaned and hot dip galvanised to SABS 763 except for the following:
- 5.1.1 No ammonium chloride salts shall be used on withdrawal from the molten zinc.
- 5.2 After galvanising no passivation must take place. Quenching may be done with clean water. No sodium dicromate must be used.
- 5.3 All surface contamination of zinc oxide (zinc ash) must be removed by means of brushing.

6.0 PRIMER COATING

- 6.1 The hot dip galvanising shall be followed as soon, as is practical by the painting procedures as specified hereunder:
- 6.1.1 Prior to painting, all steelwork shall be cleaned with a solvent cleaner and washed down with clean water to remove all traces of solvent. The solvent cleaner used must be compatible with zinc (similar to Galv Clean).
- 6.1.2 The primer coating, a two-component polyamide cured epoxy primer e.g.: PLASCOGUARD GEHOPPENS PRIMER or equivalent shall be applied to a dry film thickness of 75 microns. Application shall be in accordance with the manufacturers

instructions.

- 6.1.3 The primer coating shall be allowed to cure for a minimum period of 48 hours before handling to facilitate coating of the rest of the surfaces as well as the application of the intermediate coat.
- 6.1.4 A coat of a two-component high-build micaceous iron oxide pigmented polyamide cured re-coatable epoxy e.g.: SIGMACOVER CM MIOCOAT or equivalent shall be applied to a wet film thickness of 75-85 microns. Application shall be in accordance with manufacturers instructions.
- 6.1.5 A further 48 hours period must be allowed for curing of the primer coatings before handling the steelwork for transportation purposes.
- 6.2 All care must be exercised during handling to prevent damage of the painted surfaces.
- 6.3 Loading of steelwork must be done in such a way to limit damage of surfaces to a minimum during transit.
- 6.4 Only non-metallic slings should be used, preferably nylon or cotton material.
- 6.5 Spoornet reserves the right to inspect the premises where this work is carried out at any time during the duration of galvanising and primer painting.
- 6.6 Spoornet shall inspect all steelwork at the Tenderers premises before dispatch of any such steelwork.
- 7.0 TOP COATING**
- 7.1 The topcoat shall be applied directly after erection of the steelwork in accordance with procedures hereunder:
- 7.1.1 Damage of the primed surfaces shall be repaired, after erection, by the application of one or more coats of a two component high build micaceous iron oxide pigmented polyamide cured re-coatable epoxy coating e.g.: SIGMACOVER CM MIOCOAT or equivalent until the original film thickness is obtained.
- 7.1.2 A topcoat of a two-component aliphatic isocyanate cured acrylic finish e.g.: SIGMADUR GLOSS or equivalent shall be applied according to the paint manufacturers instructions to a minimum dry film thickness of 50 microns. The topcoat shall be determined by whether steelwork is for Spoornet or the South African Rail Commuter Corporation.
- 7.1.2.1 For Spoornet the colour shall be French Grey (SABS 1091: Code H30).
- 7.1.2.2 For the South African Rail Commuter Corporation the colour shall be Medium Sea Grey (SABS 1091: Code G24).
- 8.0 QUALITY**
- 8.1 The tenderer shall submit a copy of a Quality Plan to be implemented during the process. The Quality Plan shall include stages for preparation of metalwork prior to galvanising, for the galvanising and for the painting process.
- 8.2 The Quality Plan shall furthermore make provision for the customer's requirements for inspection and acceptance points and witnessing of tests to establish whether requirements of SABS 763 in so far as preparation of steelwork prior to galvanising, galvanising and painting requirements as per this specification are complied with.

9.0 **SUBSTITUTION**

7.1 This instruction replaces Specification CEE.0183.95.

7.2 All clauses have been revised to suit latest requirements e.g.: removal of the Complies/Does not complies reference.

END

"PREVIEW COPY ONLY"

TENDERER'S SIGNATURE: _____

DATE: _____

FOR SPOORNET: _____

GRADE: _____

SCHEDULE OF REQUIREMENTS, QUANTITIES AND PRICES

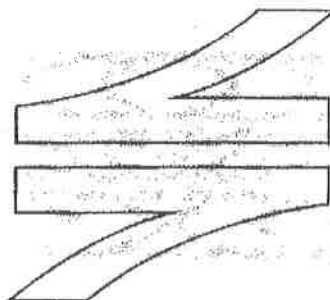
1.0

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END

FOR SPOORNET:

GRADE:



SPOORNET

A division of Transnet limited

**TECHNICAL
CONFIGURATION MANAGEMENT
SPECIFICATION**

**DRAWINGS, CATALOGUES, INSTRUCTION MANUALS
AND SPARES LISTS FOR ELECTRICAL EQUIPMENT
SUPPLIED UNDER CONTRACT**

Circulation restricted to:

Technical

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1.0 SCOPE

This specification covers Spoornet's requirements for drawings, catalogues, and instruction manuals and spares lists of electrical equipment supplied under contract.

2.0 DEFINITIONS

- 2.1 "Design drawings for approval" defines those drawings, which have to be submitted to Spoornet for approval prior to manufacture of equipment.
- 2.2 "Installation drawings" defines those drawings, which are required for the installation of the equipment.
- 2.3 "As Built drawings" defines those drawings, which reflect all the various approved designs, layouts, etc., of the actual final accepted state of the equipment.

3.0 STANDARDS AND SPECIFICATIONS

- 3.1 The following standards and specifications are referred to:

CEE.0012: Method of Tendering

SABS 0111: Engineering Drawings.

BS 308: Engineering Drawing Practice.

NRS 002: Graphical Symbols for Electrical Diagrams.

IEC 617: Graphical Symbols for Diagrams.

ASHRAE: American Society of Heating Refrigeration Air-conditioning Engineers Standard.

- 3.1.1 The following Spoornet standard (Electrical) symbol drawings are listed for reference:

CEE-PA-19: Symbols for Electrical Installations.

CEE-PA-42: Symbols for Distribution and Transmission Layout.

CEE-PA-101: Symbols for Air-conditioning installations.

CEE-TA-62: Standard Electrification Symbols.

- 3.2 Tenderers and contractors shall ensure that they work to the latest issues and amendments of the above standards and specifications.

4.0 APPENDIX

The following appendix forms an integral part of this specification:

Appendix 1: SCHEDULE OF REQUIREMENTS

This appendix calls for specific requirements applicable to the contract.

5.0 METHOD OF TENDERING

- 5.1 Tendering shall be in accordance with Spoornet (Electrical) specification CEE.0012.

- 5.2 Tenderers shall indicate clause by clause compliance or non-compliance with the specification. This shall take the form of a separate document listing all the specification clause numbers indicating the individual statement of compliance or non-compliance.
- 5.3 The Schedule of Requirements, Quantities and Prices, Appendix 1 to this specification shall be fully completed by Tenderers. Failure to submit a fully completed sheet may preclude a tender from further consideration.

6.0 LANGUAGE AND UNITS OF MEASURE

Drawings and documents shall be prepared in English and the ISO unit of measure. Other offers will be considered on merit.

7.0 DRAWINGS

- 7.1 Drawings shall be generated in either Microstation or any CAD format, which can be read by Microstation, but offers on other media will be considered on merit.
- 7.2 Drawings shall be prepared in such a manner that they fully comply with the requirements of SABS 0111 and/or BS 308.
- 7.3 Symbols, with their explanations used on the drawings but not covered by the NRS 002, IEC 617, ASHRAE or Spornet's symbol drawings shall be furnished i.e. then included on the drawing or supplied on a separate symbol list which is to be cross referenced to the drawing.
- 7.4 Where the publications referred to in clause 3.1 are at variance, the practice detailed in SABS 0111 shall take preference.
- 7.5 Drawings shall be prepared for ISO "A" series size sheets and shall not be greater than A1 size except as detailed below.
- 7.5.1 Where under exceptional circumstances the nature of the work is such that a size A1 is impractical, then the A0 size may be used.
- 7.5.2 Long drawings, where necessary for wiring/circuit diagrams, cable run diagrams, track layouts, etc., shall be prepared with widths equal to the widths of the "A" series sheets as required, but preferably not exceeding the length of an A0 sheet.
- 7.6 All interrelated drawings shall be clearly and adequately cross-referenced.
- 7.7 The Contractor hereby grants to Transnet a non-exclusive licence, in accordance with the provisions of section 22 of the Copyright Act, 1978;
- 7.7.1 to copy any plan, diagram, drawing, specification, bill of quantities, design calculation or other similar document made by the Contractor, other than under the direction or control of Transnet, in connection with the extent of work;
- 7.7.2 to make free and unrestricted use thereof for its own purposes;
- 7.7.3 to provide copies thereof to consultants to Transnet to be used by them for the purpose of such consultations and consulting services and-
- 7.7.4 to provide other parties with copies thereof for the purpose of tenders invited by Transnet.

- 7.7.5 Such non-exclusive licence shall apply *mutatis mutandis* to any plan, diagram, drawing, specification, bill and/or schedule of quantities, design calculation or other similar document made, other than under the direction or control of Transnet, by any principal or sub-contractor of the Contractor. The provisions of this clause shall not apply to documents made, in the case of plant or equipment to be supplied, for the manufacturing process of such equipment, but only to the equipment supplied itself.
- 7.7.6 Transnet shall make no separate or extra payment in respect of any non-exclusive licence granted in terms hereof.

8.0 INFORMATION REQUIRED ON DRAWINGS

- 8.1 A title block shall be provided in the lower right hand corner of each drawing, indicating:
- 8.1.1 Descriptive title.
 - 8.1.2 Contractor's drawing number.
 - 8.1.3 Space for Spoornet's drawing number (as requested in clause 7.7).
 - 8.1.4 Place of installation.
 - 8.1.5 Contract / Order number.
 - 8.1.6 Contractor's name.
 - 8.1.7 Signature or name of approving officer (as requested in clause 8.0).
 - 8.1.8 Approval date.
 - 8.1.9 Issue number.
 - 8.1.10 Projection symbol for multi-view drawings, if required.
- 8.2 Successful Tenderers can obtain a copy of Spoornet's standard title block (Microstation or DXF formats) free of charge by contacting the Documentation Management section.
- 8.3 On wiring and circuit diagrams, the following shall be specified:
- 8.3.1 Cable and wire sizes.
 - 8.3.2 Values of resistance.
 - 8.3.3 Breaking capacity of switches.
 - 8.3.4 Ratings of equipment.
- 8.4 On each assembly or sub-assembly drawing, the following shall be given:
- 8.4.1 Description of item.
 - 8.4.2 Quantity required for assembly depicted.
 - 8.4.3 Material manufactured from.
 - 8.4.4 The classification of the material according to the relevant SABS specification or other specifications referred to herein.