

**TRANSNET FREIGHT RAIL**

an Operating Division of **TRANSNET SOC LTD**

[Registration No. 1990/000900/30]

**REQUEST FOR PROPOSAL [RFP]**

**[GOODS]**

**FOR THE SUPPLY AND DELIVER OF RADIO TRSBAND ANTENNAS ULTRA HIGH FREQUENCY (UHF) & VERY HIGH FRQUENCY (VHF) FOR A PERIOD OF THREE YEARS ON AN "AS AND WHEN REQUIRED BASIS**

**RFP NUMBER** HOAC-HO-18044

**ISSUE DATE:** 01 July 2015

**CLOSING DATE:** 21 July 2015

**CLOSING TIME:** 10:00am

**BID VALIDITY PERIOD:** 120 Business Days 13 January 2016 from Closing Date

**"PREVIEW COPY ONLY"**

## SCHEDULE OF BID DOCUMENTS

Section No	Page
SECTION 1: NOTICE TO BIDDERS .....	4
1 INVITATION TO BID .....	4
2 FORMAL BRIEFING .....	4
3 PROPOSAL SUBMISSION .....	5
4 DELIVERY INSTRUCTIONS FOR RFP .....	5
5 BROAD-BASED BLACK ECONOMIC EMPOWERMENT AND SOCIO-ECONOMIC OBLIGATIONS .....	6
6 COMMUNICATION .....	8
7 CONFIDENTIALITY .....	8
8 INSTRUCTIONS FOR COMPLETING THE RFP .....	8
9 COMPLIANCE .....	9
10 DISCLAIMERS .....	9
11 LEGAL REVIEW .....	10
SECTION 2: BACKGROUND, OVERVIEW AND SCOPE OF REQUIREMENTS .....	11
1 BACKGROUND .....	11
2 EXECUTIVE OVERVIEW .....	11
3 SCOPE OF REQUIREMENTS .....	12
4 GREEN ECONOMY / CARBON FOOTPRINT .....	13
5 GENERAL SUPPLIER OBLIGATIONS .....	13
6 EVALUATION METHODOLOGY .....	14
SECTION 3: PRICING AND DELIVERY SCHEDULE .....	18
1 DISCLOSURE OF PRICES TENDERED .....	19
2 "AS AND WHEN REQUIRED" CONTRACTS .....	19
3 RETURN OF SURPLUS GOODS .....	19
4 RESPONDENT'S SAMPLES .....	20
5 MANUFACTURERS .....	20
6 INSPECTION DETAILS .....	20
7 IMPORTED CONTENT .....	21
8 EXCHANGE AND REMITTANCE .....	21
9 NATIONAL RAILWAY SAFETY REGULATOR ACT .....	21
10 SERVICE LEVELS .....	22
11 RISK .....	22
12 REFERENCES .....	23
13 FINANCIAL STABILITY .....	23
SECTION 4: PROPOSAL FORM AND LIST OF RETURNABLE DOCUMENTS .....	24
SECTION 5: RFP DECLARATION AND BREACH OF LAW FORM .....	30
SECTION 6: RFP CLARIFICATION REQUEST FORM .....	33
SECTION 7: B-BBEE PREFERENCE POINTS CLAIM FORM .....	34
SECTION 8: CERTIFICATE OF ATTENDANCE OF COMPULSORY RFP BRIEFING .....	40
SECTION 9: SUPPLIER DEVELOPMENT INITIATIVES .....	41
SECTION 10: DECLARATION OF SUPPLIER DEVELOPMENT COMMITMENTS .....	45

SECTION 11: B-BBEE IMPROVEMENT PLAN .....46

ANNEXURE A	TECHNICAL CLAUSE BY CLAUSE COMPLIANCE
ANNEXURE B	SUPPLIER DEVELOPMENT VALUE SUMMARY
ANNEXURE C	SUPPLIER DEVELOPMENT PLAN
ANNEXURE D	B-BBEE IMPROVEMENT PLAN
ANNEXURE E	SPECIFICATIONS AND DRAWINGS
ANNEXURE F	SUPPLIER DEVELOPMENT GUIDELINE DOCUMENT
ANNEXURE G	TERMS AND CONDITIONS OF CONTRACT
ANNEXURE H	GENERAL BID CONDITIONS
ANNEXURE I	SUPPLIER INTEGRITY PACT
ANNEXURE J	NON DISCLOSURE AGREEMENT

**"PREVIEW COPY ONLY"**

**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE YEARS  
ON AN "AS AND WHEN REQUIRED BASIS**

**Section 1: NOTICE TO BIDDERS**

**1 INVITATION TO BID**

Responses to this RFP [hereinafter referred to as a **Bid** or a **Proposal**] are requested from persons, companies, close corporations or enterprises [hereinafter referred to as an **entity, Respondent** or **Bidder**].

<b>DESCRIPTION</b>	RFP for the Supply and Deliver of <b>radio triband antennas (UHF &amp; VHF)</b> for a period of Three years on an "as and when required basis
<b>BID FEE AND BANKING DETAILS</b>	R500.00 [inclusive of VAT] per set. Payment is to be made as follows: Account Name: Transnet Freight Rail Account: Standard Bank Account number: 203158598 Branch code: 004805 Reference: HOAC-HO-18044 NOTE - This amount is not refundable. A receipt for such payment made must be presented when collecting the RFP documents and submitted thereafter with your Proposal.
<b>INSPECT / COLLECT DOCUMENTS FROM</b>	The office of the Secretariat, Inyanda House No 1, Ground Floor, 21 Wellington Road, Parktown
<b>ISSUE DATE AND COLLECTION DATE DEADLINE</b>	Between 09:00 and 15:00 from 01 July 2015 until 08 July 2015. Note: If a bid fee is applicable, payment must be effected prior to the deadline for collection. Pursuant to this requirement, should a third party [such as a courier] be instructed to collect RFP documents on behalf of a Respondent, please ensure that this person [the third party] has a "proof of payment" receipt for presentation to Transnet when collecting the RFP documents.
<b>COMPULSORY BRIEFING SESSION</b>	Yes Refer to paragraph 2 for details.
<b>CLOSING DATE</b>	<b>10:00 on Tuesday 21 July 2015</b> Bidders must ensure that bids are delivered timeously to the correct address. As a general rule, if a bid is late or delivered to the incorrect address, it will not be accepted for consideration.
<b>VALIDITY PERIOD</b>	<b>120 Business Days 13 January 2016 from Closing Date.</b> Bidders are to note that they may be requested to extend the validity period of their bid, on the same terms and conditions, if the internal evaluation process has not been finalised within the validity period.

Any additional information or clarification will be faxed or emailed to all Respondents, if necessary.

**2 FORMAL BRIEFING**

A compulsory pre-proposal RFP briefing will be conducted at 15 Girton Road, Barongwa Boardroom, Inyanda House 2, Parktown on the **09 July 2015**, at 09h30am for a period of ± 2 hours. [Respondents to provide own transportation and accommodation]. The briefing session will start punctually and information will not be repeated for the benefit of Respondents arriving late.

- 2.1 *A Certificate of Attendance set out in Section 8 hereto must be completed and submitted with your Proposal as proof of attendance is required for a **compulsory** RFP briefing.*
- 2.2 Respondents failing to attend the compulsory RFP briefing will be disqualified.
- 2.3 Respondents without a valid RFP document in their possession will not be allowed to attend the RFP briefing.

### 3 PROPOSAL SUBMISSION

Proposals must be submitted in a sealed envelope addressed as follows:

The Secretariat, Transnet Freight Rail Acquisition Council  
 RFP No: HOAC-HO-18044  
 Description: The Supply and Deliver of radio triband antennas (uhf & vhf) for a period of Three years on an "as and when required basis."  
 Closing date and time: 21 July 2015 at 10h00am  
 Closing address *[Refer to options in paragraph 4 below]*

All envelopes must reflect the return address of the Respondent on the reverse side.

### 4 DELIVERY INSTRUCTIONS FOR RFP

#### 4.1 Delivery by hand

If delivered by hand, the envelope must be deposited in the Transnet tender box which is located at the main entrance of Inyanda House, 21 Wellington Road, Parktown, and must be addressed as follows:

THE SECRETARIAT  
 TRANSNET FREIGHT RAIL ACQUISITION COUNCIL  
 TENDER BOX  
 INYANDA HOUSE 1  
 21 WELLINGTON ROAD  
 PARKTOWN

- a) The measurements of the "tender slot" are 500mm wide x 100mm high, and Respondents must please ensure that response documents or files are no larger than the above dimensions. Responses which are too bulky [i.e. more than 100mm thick] must be split into two or more files, and placed in separate envelopes, each such envelope to be addressed as required in paragraph 3 above.
- b) It should also be noted that the above tender box is located at the ground level main entrance in 21 Wellington Road and is accessible to the public 24 hours per day, 7 days a week

#### 4.2 Dispatch by courier

If dispatched by courier, the envelope must be addressed as follows and delivered to the Office of The Secretariat, Transnet Freight Rail Acquisition Council and a signature obtained from that Office:

THE SECRETARIAT  
 TRANSNET FREIGHT RAIL ACQUISITION COUNCIL  
 TENDER BOX  
 INYANDA HOUSE 1  
 21 WELLINGTON ROAD  
 PARKTOWN

### 5 BROAD-BASED BLACK ECONOMIC EMPOWERMENT AND SOCIO-ECONOMIC OBLIGATIONS

As described in more detail in the attached BBEE Claim Form and as prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations, Respondents are to note that Transnet will allow a "preference" to companies who provide a valid B-BBEE Verification Certificate.

The value of this bid is estimated to be exceed R1 000 000 (all applicable taxes included); and therefore the **90/10** system shall be applicable.

Respondents are required to complete Section 7 [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.

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

#### 5.1 B-BBEE Joint Ventures or Consortiums

Respondents who would wish to respond to this RFP as a Joint Venture [JV] or consortium with B-BBEE entities, must state their intention to do so in their RFP submission. Such Respondents must also submit a signed JV or consortium agreement between the parties clearly stating the percentage [%] split of business and the associated responsibilities of each party. If such a JV or consortium agreement is unavailable, the partners must submit confirmation in writing of their intention to enter into a JV or consortium agreement should they be awarded business by Transnet through this RFP process. This written confirmation must clearly indicate the percentage [%] split of business and the responsibilities of each party. In such cases, award of business will only take place once a signed copy of a JV or consortium agreement is submitted to Transnet.

Respondents are to note the requirements for B-BBEE compliance of JVs or consortiums as required by Section 7 [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.

Note: Failure to submit a valid and original B-BBEE certificate for the JV or a certified copy thereof at the Closing Date of this RFP will result in a score of zero being allocated for B-BBEE.

#### 5.2 Subcontracting

Transnet fully endorses Government's transformation and empowerment objectives and when contemplating subcontracting Respondents are requested to give preference to companies which are

Black Owned, Black Women Owned, Black Youth Owned, owned by Black People with Disabilities, EMEs and QSEs including any companies designated as B-BBEE Facilitators<sup>1</sup>.

If contemplating subcontracting, please note that a Respondent will not be awarded points for B-BBEE if it is indicated in its Proposal that such Respondent intends subcontracting more than 25% [twenty-five percent] of the value of the contract to an entity/entities that do not qualify for at least the same points that the Respondent qualifies for, unless the intended subcontractor is an EME with the capability to execute the contract.

A person awarded a contract may not subcontract more than 25% [twenty-five percent] of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is subcontracted to an EME that has the capability and ability to execute the subcontract.

In terms of Section 7 of this RFP [the B-BBEE Preference Point Claim Form] Respondents are required to indicate the percentage of the contract that will be sub-contracted as well as the B-BBEE status of the sub-contractor/s.

### 5.3 B-BBEE Improvement Plan

Transnet encourages its Suppliers to constantly strive to improve their B-BBEE rating. Whereas Respondents will be allocated points in terms of a preference point system based on its B-BBEE scorecard to be assessed as detailed in paragraph 5.1 above, in addition to such scoring, Transnet also requests that Respondents submit a B-BBEE improvement plan. Respondents are therefore requested to indicate the extent to which they will maintain or improve their B-BBEE status over the contract period.

Respondents are requested to submit their B-BBEE Improvement Plan as an additional document with their Proposals by completion of **Annexure D** appended hereto. [Refer to Section 11 and Annexure D for further instructions]

### 5.4 Supplier Development Initiatives

Historically in South Africa there has been a lack of investment in infrastructure, skills and capability development which has resulted in inequality in the income distribution and wealth of a significant portion of the population. There have been a number of Government initiatives developed to address these challenges. In particular, the New Growth Path [NGP] and New Development Plan [NDP] aligns and builds on previous policies to ensure the achievement of Government's development objectives for South Africa.

Transnet fully endorses and supports Government's economic policies through its facilitation of Supplier Development [SD] initiatives. Hence Respondents are required to submit their commitments with regard to Supplier Development Initiatives over the duration of this contract.

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<sup>1</sup> The Minister of the Department of Trade and Industry has the power to designate certain Organs of State or Public Entities as B-BBEE Facilitators. For example, the South African National Military Veterans' Association (SANMVA) has been designated as a B-BBEE Facilitator. As such they will be treated as having rights of ownership held 100% by Black People, 40% by Black Women and 20% by Black designated groups.

As a prequalification criterion to participate in this bid, Respondents are required to provide a commitment that the monetary value of all SD initiatives to be undertaken by them will not be less than 5% [Five percent] for Exempted Micro Enterprises (EME's), 10% [Ten percent] Qualifying Small Enterprises (QSE's) and [15%] Large Enterprises (LE's) –of the contract value.

*All Respondents must refer to Section 9 for instructions and complete Section\_10 [Declaration of Supplier Development Commitments] as this is a mandatory returnable document. In addition, Respondents are required to submit a Supplier Development Plan and SD Value Summary, **Annexure B and C** as these are required as essential returnable documents.*

*Note: Should a JV be envisaged the principal Respondent is required to submit the required responses as indicated above.*

**The commitments made by the successful Respondents will be incorporated as a term of the contract and monitored for compliance.**

## 6 COMMUNICATION

- 6.1 For specific queries relating to this RFP, an RFP Clarification Request Form should be submitted to Londiwe.Shabalala@transnet.net before **12:00 on 15 July 2015**, substantially in the form set out in Section 6 hereto. In the interest of fairness and transparency Transnet's response to such a query will then be made available to the other Respondents who have collected RFP documents. For this purpose Transnet will communicate with Respondents using the contact details provided to the Secretariat on issue of the bid documentation to the Respondent. Kindly ensure that you provide the Secretariat with the **correct** contact details, as Transnet will not accept responsibility for being unable to contact a bidder who provided incorrect contact details.
- 6.2 After the closing date of the RFP, a Respondent may only communicate with the Secretariat of the Transnet Freight Rail Acquisition Council, at telephone number 011 544-9486, email Prudence.Nkabinde@transnet.net on any matter relating to its RFP Proposal.
- 6.3 Respondents are to note that changes to its submission will not be considered after the closing date. Respondents are warned that a Proposal may be liable to disqualification should any attempt be made by a Respondent either directly or indirectly to canvass any officer or employee of Transnet in respect of this RFP between the closing date and the date of the award of the business. Furthermore, Respondents found to be in collusion with one another will be automatically disqualified and restricted from doing business with Transnet in the future.

## 7 CONFIDENTIALITY

- 7.1 All information related to this RFP is to be treated with strict confidence. In this regard Respondents are required to certify that they have acquainted themselves with the Non-Disclosure Agreement. All information related to a subsequent contract, both during and after completion thereof, will be treated with strict confidence. Should the need however arise to divulge any information gleaned from provision of the Goods, which is either directly or indirectly related to Transnet's business, written approval to divulge such information must be obtained from Transnet.

## 8 INSTRUCTIONS FOR COMPLETING THE RFP

- 8.1 Proposals must be submitted in duplicate hard copies [1 original and 2 copies] and must be bound.



- 8.2 Sign one set of original documents [sign, stamp and date the bottom of each page]. This set will serve as the legal and binding copy. A duplicate set of documents is required. This second set must be a copy of the original signed Proposal.
- 8.3 Both sets of documents are to be submitted to the address specified in paragraph 4 above, and Bidders must ensure that the original and copies (where applicable) are identical in all respects as Transnet will not accept any liability for having disqualified a bidder for failing to provide a mandatory returnable document in either the original or the copy of the RFP albeit that it was included in the other.
- 8.4 A CD copy of the RFP Proposal must be submitted. Please provide files in MS Word / Excel format, not PDF versions, noting that the signed original set will be legally binding.
- 8.5 Proposals to this RFP must be submitted in clearly demarcated files (Reference accordingly) in terms of the following:
- Returnable Checklists
  - B-BBEE Scorecard
  - Technical Proposal
  - Financial Proposal
  - Appendixes
- 8.6 **All returnable documents tabled in the Proposal Form [Section 4] must be returned with your Proposal.**
- 8.7 Unless otherwise expressly stated, all Proposals furnished pursuant to this RFP shall be deemed to be offers. Any exceptions to this statement must be clearly and specifically indicated.
- 8.8 Any additional conditions must be embodied in an accompanying letter. Subject only to clause 15 [Alterations made by the Respondent to Bid Prices] of the General Bid Conditions, alterations, additions or deletions must not be made by the Respondent to the actual RFP documents.

## 9 COMPLIANCE

The successful Respondent [hereinafter referred to as the **Supplier**] shall be in full and complete compliance with any and all applicable laws and regulations.

## 10 DISCLAIMERS

Respondents are hereby advised that Transnet is not committed to any course of action as a result of its issuance of this RFP and/or its receipt of Proposals. In particular, please note that Transnet reserves the right to:

- 10.1 modify the RFP's Goods and request Respondents to re-bid on any such changes;
- 10.2 reject any Proposal which does not conform to instructions and specifications which are detailed herein;
- 10.3 disqualify Proposals submitted after the stated submission deadline [closing date];
- 10.4 not necessarily accept the lowest priced Proposal or an alternative bid;
- 10.5 reject all Proposals, if it so decides;
- 10.6 withdraw the RFP on good cause shown;
- 10.7 award a contract in connection with this Proposal at any time after the RFP's closing date;

- 10.8 award a contract for only a portion of the proposed Goods which are reflected in the scope of this RFP;
- 10.9 split the award of the contract between more than one Supplier, should it at Transnet's discretion be more advantageous in terms of, amongst others, cost or developmental considerations;
- 10.10 make no award of a contract;
- 10.11 should a contract be awarded on the strength of information furnished by the Respondent, which after conclusion of the contract, is proved to have been incorrect, Transnet reserves the right to cancel the contract.

Transnet reserves the right to undertake post-tender negotiations [PTN] with selected Respondents or any number of short-listed Respondents, such PTN to include, at Transnet's option, any evaluation criteria listed in this RFP document. Transnet reserves the right to award the business to the highest scoring bidder/s unless objective criteria justify the award to another bidder.

Should the preferred bidder fail to sign or commence with the contract within a reasonable period after being requested to do so, Transnet reserves the right to award the business to the next ranked bidder, provided that he/she is still prepared to provide the required goods at the quoted price.

Transnet reserves the right to lower the threshold for Technical Functionality from 70% to [60 percent] if no Bidders pass the predetermined minimum threshold in respect of Technical Functionality.

Kindly note that Transnet will not reimburse any Respondent for any preparatory costs or other work performed in connection with its Proposal, whether or not the Respondent is awarded a contract.

## 11 LEGAL REVIEW

A Proposal submitted by a Respondent will be subjected to review and acceptance or rejection of its proposed contractual terms and conditions by Transnet's Legal Counsel, prior to consideration for an award of business.

**Transnet urges its clients, suppliers and the general public to report any fraud or corruption to**

**TIP-OFFS ANONYMOUS : 0800 003 056**

**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
YEARS ON AN "AS AND WHEN REQUIRED BASIS**

**Section 2: BACKGROUND, OVERVIEW AND SCOPE OF REQUIREMENTS**

**1 BACKGROUND**

Transnet Freight Rail (TFR) is a business unit of Transnet Limited, and has a broad range of telecommunication services and devices that ensures the safe movement of trains. Such devices include train radios and telemeters which makes use of the Ultra High Frequency (UHF) and Very High Frequency (VHF) triband antennas for train authorisation between the train driver and the Train Control Officer (TCO), and for better train handling of the loco consist while the train is in transit.

TFR is embarking on an exercise to equip the new 1064 locomotive fleet with the train radios and Telemeters that require the UHF and VHF triband antennas for functionality.

**2 EXECUTIVE OVERVIEW**

Whereas Transnet is seeking a partner(s) to provide solutions for its Locomotive's train radio antennas nationally, it also seeks to improve its current processes for providing these Goods to its end user community throughout its locations.

The selected Supplier(s) will share in the mission and business objectives of Transnet. These mutual goals will be met by meeting contractual requirements and new challenges in an environment of teamwork, joint participation, flexibility, innovation and open communications. In this spirit of partnership, Transnet and its Supplier(s) will study the current ways they do business to enhance current practices and support processes and systems. Such a partnership will allow Transnet to reach higher levels of quality, service and profitability.

Specifically, Transnet Freight Rail seeks to benefit from this partnership in the following ways:

- 2.1 Transnet must receive reduced cost of acquisition and improved service benefits resulting from the Supplier's economies of scale and streamlined service processes.
- 2.2 Transnet must achieve appropriate availability that meets user needs while reducing costs for both Transnet and the chosen Supplier(s).
- 2.3 Transnet must receive proactive improvements from the Supplier with respect to supply of Goods and related processes.
- 2.4 Transnet's overall competitive advantage must be strengthened by the chosen Supplier's leading edge technology and service delivery systems.
- 2.5 Transnet end users must be able to rely on the chosen Supplier's personnel for service enquiries, recommendations and substitutions.
- 2.6 Transnet must reduce costs by streamlining its acquisition of Goods, including managed service processes on a Group basis.

### 3 SCOPE OF REQUIREMENTS

- 3.1 The scope of the tender includes the following:
- UHF, GSM/Wi-Fi and GPS triband antennas
  - VHF, GSM/Wi-Fi and GPS triband antennas
- 3.2 This specification covers the requirements of TFR for the supply of UHF and VHF low profile triband (UHF/VHF, GSM/Wi-Fi and GPS) antennas used on the trains. The UHF triband antenna must be supplied cut for the combined 406 – 430 MHz and 450 – 470 MHz frequency bands while the VHF triband antenna must be supplied cut to 136 – 174 MHz frequency band. The maximum transmit power for these antennas is 25 Watts, 0dB gain and the VSWR must not exceed 1.5:1.

The following requirements shall be adhered to by the bidders; bidders shall submit:

1. A comprehensive proposal including the specifications, diagrams and detailed information for the items in the Schedule of Requirements and as called for in the specification;
2. Respondent will be required to submit a sample of the UHF antenna tendered for failure to submit, tenderer will be disqualified;

For VHF antennas not approved by TFR, samples shall be submitted to TFR with the tender bids.

If the antenna offered by the respondent in this tender differs in structure, model number or operationally, then the antenna must be re-submitted with the tender bids for evaluation.

Quantities to be provided per sample shall be one (1) of each antenna, per supplier (i.e 1 x UHF Triband Antenna and 1 x VHF Triband Antenna).

- Each unit shall be packaged in a separate enclosure, clearly marked the type of unit enclosed and the supplier's name;
- Manuals, cables and performance results of the antennas shall also be supplied;

The Laboratory tests will be conducted for two (2) weeks against the following:

- Technical Specification - Low Profile DC Grounded Combined VHF, UHF, GSM /W-Fi, and GPS Train Antennas Specification.
- HandWave Compliance Tests
- Dimensions of the antennas against the Low Profile DC Grounded Combined VHF, UHF, GSM /W-Fi, and GPS Train Antennas Specification

The supplier's antennas that have passed the product approval stage will proceed to the next stage of evaluation (Technical Functionality).

Technical Evaluation Results (Laboratory Tests) can be made available to the supplier's on request.

Suppliers can use the product evaluation results from the National Test Center to correct the areas of non-conformances for future tendering.

Equipment supplied must be ICASA approved; ICASA approval certificate and dealers licence must be submitted with the tender bids.

3. A comprehensive delivery schedule including equipment lead times;
4. List of previous projects and similar work undertaken with traceable references;
5. A detailed outline of the company's technical capacity including the organisational structure and technical personnel qualifications;

6. Bidders must submit a clause by clause compliance to the Low Profile DC Grounded Combined VHF, UHF, GSM /W-Fi, and GPS Train Antennas specification bearing the following letters

- CF – Comply Fully
- CP – Comply Partially (must have accompanying reasons)
- DNC – Do not Comply (may have accompanying reasons)
- Noted

### 3.3 NOTES:

**The awarded bidder will have to adhere to the following requirements;**

1. Supplier(s) must send all antennas to the National Test Centre (Luipaardsvlei) for testing before delivery can be accepted.
2. Once testing is completed, antennas must be collected, packaged and delivered to 96 Rissik street.
3. Supplier(s) can deliver antennas in batches, a minimum of 50 units, per antenna type shall be accepted.

As prescribed in terms of the PPPFA and its Regulations Respondents are to note the following:

- Technical (product approval) is included as a threshold with a prescribed percentage threshold of 100%.
- Functionality is included as a threshold with a prescribed percentage threshold of 70%.

*Respondents must complete and submit **Annexure A – Technical clause by clause compliance which includes a technical questionnaire.***

*A Respondent's compliance with the minimum functionality and technical threshold will be measured by their responses to technical proposal and product approval.*

## 4 GREEN ECONOMY / CARBON FOOTPRINT

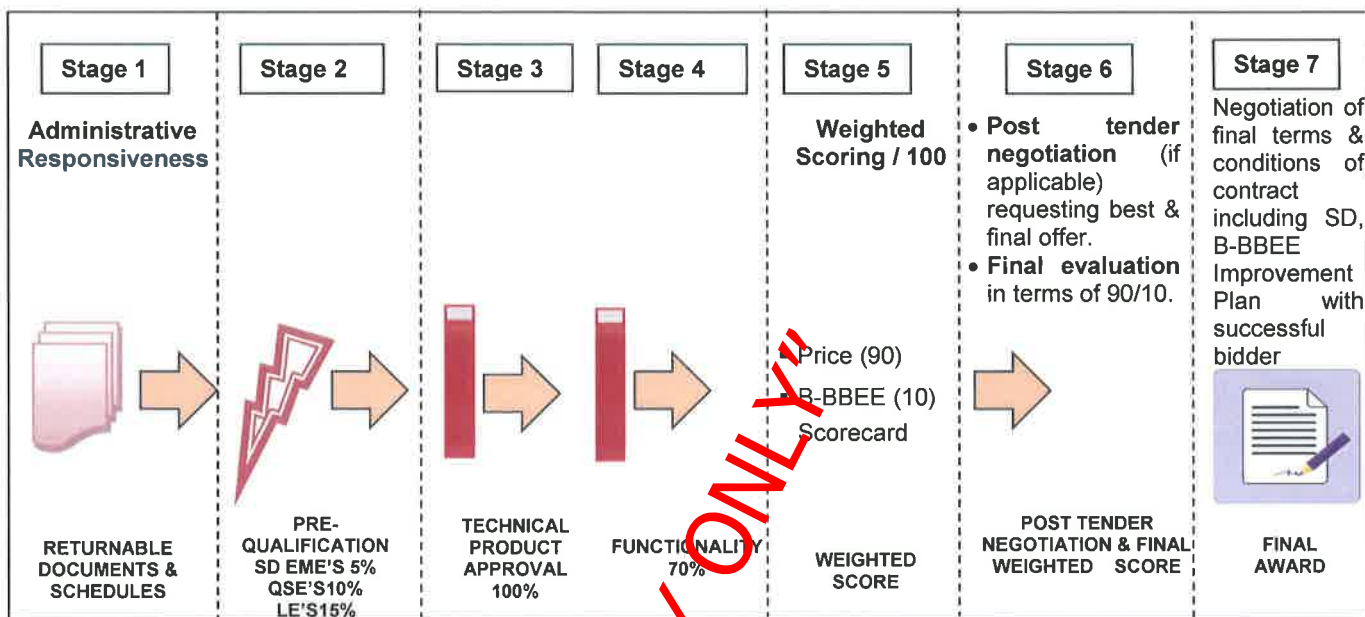
Transnet wishes to have an understanding of your company's position with regard to environmental commitments, including key environmental characteristics such as waste disposal, recycling and energy conservation. *Please submit details of your entity's policies in this regard.*

## 5 GENERAL SUPPLIER OBLIGATIONS

- 5.1 The Supplier(s) shall be fully responsible to Transnet for the acts and omissions of persons directly or indirectly employed by them.
- 5.2 The Supplier(s) must comply with the requirements stated in this RFP.

## 6 EVALUATION METHODOLOGY

Transnet will utilise the following methodology and criteria in selecting a preferred Supplier, if so required:



NB: Evaluation of the various stages will normally take place in a sequential manner. However, in order to expedite the process, Transnet reserves the right to conduct the different stages of the evaluation process in parallel. In such instances the evaluation of bidders at any given stage must therefore not be interpreted to mean that bidders have necessarily passed any previous stage(s).

### 6.1 STAGE ONE: Test for Administrative Responsiveness

The test for administrative responsiveness will include the following:

Administrative responsiveness check	RFP Reference
<ul style="list-style-type: none"> <li>Whether the Bid has been lodged on time</li> </ul>	Section 1 paragraph 3
<ul style="list-style-type: none"> <li>Whether all Returnable Documents and/or schedules [where applicable] were completed and returned by the closing date and time</li> </ul>	Section 4
<ul style="list-style-type: none"> <li>Verify the validity of all returnable documents</li> </ul>	Section 4, page 24 and 25

**The test for administrative responsiveness [Stage One] must be passed for a Respondent's Proposal to progress to Stage Two for further pre-qualification**

## 6.2 STAGE TWO: Test for Substantive Responsiveness to RFP

The test for substantive responsiveness to this RFP will include the following:

Check for substantive responsiveness	RFP Reference
<ul style="list-style-type: none"> <li>Whether any general pre-qualification criteria set by Transnet, have been met</li> </ul>	<i>Section 1 paragraphs 2.2, 6, 10.3</i> <i>Section 4 – validity period</i> <i>Section 8, General Bid Conditions clause 19</i> <i>Sections 10, 11</i>
<ul style="list-style-type: none"> <li>Whether the Bid contains a priced offer</li> </ul>	<i>Section 3</i>
<ul style="list-style-type: none"> <li>Whether the Bid materially complies with the scope and/or specification given</li> </ul>	<i>All Sections</i>
<ul style="list-style-type: none"> <li>Whether any Technical pre-qualification set by Transnet have been met as follows:           <ul style="list-style-type: none"> <li>100% Technical product approval (Product submission)</li> <li>70% Functionality (technical proposal and mandatory returnable documents)</li> </ul> </li> </ul>	<i>Section 2 – Scope of Work</i>
<ul style="list-style-type: none"> <li>Whether the Bid contains a commitment that the monetary value of all SD initiatives to be undertaken by the Respondent will not be less than 5% for EME's, 10 % for QSE's and 15% for LE's of the contract value.</li> </ul>	<i>Section 1 paragraph 5.5</i>
<ul style="list-style-type: none"> <li>Entity's financial stability</li> </ul>	<i>Section 2 paragraph 20</i>

***The test for substantive responsiveness [Stage Two] must be passed for a Respondent's Proposal to progress to Stage Three for further evaluation***

## 6.3 STAGE THREE: Minimum Threshold of 100% for Technical product approval

The test for the Technical product approval threshold will include the following.

Technical Evaluation Criteria	% Weightings	RFP Reference
Product Approval	100%	<i>Section 2 [Scope of Requirements]</i>
<b>Total Weighting:</b>	<b>100%</b>	
<b>Minimum qualifying score required:</b>	<b>100%</b>	

#### 6.4 STAGE FOUR: Minimum Threshold of 70% for Functionality Criteria

The test for the Functionality threshold will include the following:

Technical Evaluation Criteria	100% Weightings	RFP Reference
Delivery Schedule	60%	Section 2 [Scope of Requirements]
Technical Capacity /Resources	30%	Section 2 [Scope of Requirements]
References/ previous performance	10%	Section 2 [Scope of Requirements]
<b>Total Weighting:</b>		<b>100%</b>
<b>Minimum qualifying score required:</b>		<b>70%</b>

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/Four] must be met or exceeded for a Respondent's Proposal to progress to Stage Four/Five for final evaluation***

#### 6.5 STAGE FIVE: Evaluation and Final Weighted Scoring

a) **Price Criteria** [Weighted score 90 points]:

Evaluation Criteria	RFP Reference
• Commercial offer	Section 3

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

$$PS = 90 \left( 1 - \frac{Pt - Pmin}{Pmin} \right)$$

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 10 points]

- B-BBEE - current scorecard / B-BBEE Preference Points Claims Form



- Preference points will be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table indicated Section 4.1 of the B-BBEE Preference Points Claim Form.

#### 6.6 SUMMARY: Applicable Thresholds and Final Evaluated Weightings

Threshold	Minimum Percentage [%]
Technical product approval	100%
Functionality	70%

Evaluation Criteria	Final Weighted Scores
Price	90
B-BBEE - Scorecard	10
<b>TOTAL SCORE:</b>	<b>100</b>

#### 6.7 STAGE SIX: 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 90/10 and the contract will be negotiated and awarded to the successful Respondent(s).

#### 6.8 STAGE SEVEN: Final Contract Award

Transnet will negotiate the final terms and condition the contract with the successful Respondent(s). This may include aspects such as Supplier Development, the B-BBEE Improvement Plan, price and delivery. Thereafter the final contract will be awarded to the successful Respondent(s).

#### **IMPORTANT NOTICE TO RESPONDENTS**

Transnet has appointed a Procurement Ombudsman to investigate any material complaint in respect of RFPs exceeding R5million [five million S.A. Rand] in value. Should a Respondent have any material concern regarding an RFP process which meets this threshold, a complaint may be lodged with the Ombudsman for further investigation. The Ombudsman reserves the right to refer the complaint to an external service provider for investigation.

It is incumbent on the Respondent to familiarise himself/herself with the Terms of Reference OF the Ombudsman which are available for review at Transnet's website [www.transnet.net](http://www.transnet.net).

An official complaint form may be downloaded from this website and submitted, together with any supporting documentation, within the prescribed period, to [procurement.ombud@transnet.net](mailto:procurement.ombud@transnet.net).

For transactions below the abovementioned threshold, a complaint may be lodged with the Chief Procurement Officer of the relevant Transnet Operating Division/Specialist Unit.

Respondents are to note that a complaint must be made in good faith. If a complaint is made in bad faith, Transnet reserves the right to place such a Bidder on its List of Excluded Bidders.

**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
YEARS ON AN "AS AND WHEN REQUIRED BASIS**

**CLOSING VENUE: Refer to section 1  
CLOSING DATE: 21 July 2015  
CLOSING TIME: 10h00am  
VALIDITY PERIOD 120 business days 13 January 2015**

**Section 3: PRICING AND DELIVERY SCHEDULE**

*Respondents are required to complete the table below:*

<b>Item No</b>	<b>Description of Item</b>	<b>Quantity</b>	<b>Unit Rate</b>	<b>TOTAL PRICE OF ITEM [ZAR]</b>
1	UHF, GSM/Wi-Fi and GPS triband antennas	2340		
2	VHF, GSM/Wi-Fi and GPS triband antennas	1170		
	Total			

**Notes to Pricing:**

- a) All Prices must be quoted in South African Rand, exclusive of VAT
- b) To facilitate like-for-like comparison bidders must submit pricing strictly in accordance with this pricing schedule and not utilise a different format. Deviation from this pricing schedule could result in a bid being declared non responsive.
- c) Quantities given are estimates only. Any orders resulting from this RFP will be on an "as and when required" basis.
- d) Prices are to be quoted on a delivered basis to 96 Rissik street Johannesburg.
- e) Please note that should you have offered a discounted price(s), Transnet will only consider such price discount(s) in the final evaluation stage if offered on an unconditional basis.
- f) Where a Respondent's price(s) includes imported content, the rate of exchange to be used must be the currency's rate published by the South African Reserve Bank 7 [seven] calendar days prior to the closing date of this RFP:  
Currency rate of exchange utilised: \_\_\_\_\_
- g) Manufacturing and delivery lead time calculated from date of receipt of purchase order: \_\_\_\_\_ weeks.
- h) Respondents, if awarded the contract, are required to indicate that their prices quoted would be kept firm and fixed for the contract duration. [Not to be confused with bid validity period Section 1, clause 1]

<b>YES</b>	
------------	--

**1 DISCLOSURE OF PRICES TENDERED**

1.1 Respondents must indicate below whether Transnet may disclose their tendered prices and conditions to other Respondents:

<b>YES</b>	
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<b>NO</b>	
-----------	--

**2 "AS AND WHEN REQUIRED" CONTRACTS**

2.1 Purchase orders will be placed on the Supplier(s) from time to time as and when Goods are required.

2.2 Transnet reserves the right to place purchase orders until the last day of the contract for deliveries to be effected, within the delivery period / lead time specified, beyond the expiry date of the contract under the same terms and conditions as agreed upon.

2.3 Delivery requirements may be stipulated in purchase orders and scheduled deliveries may be called for. However, delivery periods and maximum monthly rates of delivery offered by the Respondents will be used as guidelines in establishing lead times and monthly delivery requirements with the Supplier.

2.4 Where scheduled deliveries are required, the delivery period(s) specified must be strictly complied with, unless otherwise requested by Transnet. Material supplied earlier than specified may not be paid for or may be returned by Transnet, with the Supplier being held liable for all expenses so incurred, e.g. handling and transport charges.

2.5 If the delivery period offered by the Respondents is subject to a maximum monthly production capacity, full particulars must be indicated in Section 3 [*Pricing and Delivery Schedule*]

2.6 The Respondent must state hereunder its annual holiday closedown period [if applicable] and whether this period has been included in the delivery lead time offered:

---

2.7 Respondents are required to indicate below the action that the Respondent proposes to take to ensure continuity of supply during non-working days or holidays and periods occupied in stocktaking or in effecting repairs to plant or in overhaul of plant which would ordinarily occur within the stated delivery lead time/s:

---

**3 RETURN OF SURPLUS GOODS**

Respondents are required to indicate whether they have a return policy in place (if so attach a copy):

<b>YES</b>	
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<b>NO</b>	
-----------	--

Respondents are required to indicate a reasonable timeframe during which Transnet may return any surplus goods:

---

**4 RESPONDENT'S SAMPLES**

4.1 In this RFP Respondents are required to submit samples of the Goods tendered for by it. The sample(s) must be forwarded on or before the deadline date, which is 21 July 2015 closing date of tender, to the addressee hereunder:

TRANSNET FREIGHT RAIL ACQUISITION COUNCIL  
TENDER BOX  
INYANDA HOUSE 1  
21 WELLINGTON ROAD  
PARKTOWN

The sample(s) must be clearly marked with the reference number of this RFP and the names and addresses of both the Respondent and the manufacturer.

4.2 Failure to submit the sample(s) in due time may result in a Proposal being rejected. Proposals must under no circumstances be included in the package containing a sample(s).

4.3 The Respondents must state the following:

Has/have a sample(s) been submitted?	How and to whom forwarded?	Date of dispatch

**5 MANUFACTURERS**

The Respondents must state hereunder the actual manufacturer(s) of the Goods tendered for:

5.1 Local Manufacturer(s):

RFP ITEM NO.	NAME	BUSINESS ADDRESS

5.2 Foreign Manufacturer(s):

RFP ITEM NO.	NAME	BUSINESS ADDRESS

**6 INSPECTION DETAILS**

The Respondents must state the actual name(s) and address/addresses of the suppliers of the Goods for inspection purposes only:

6.1 Local Manufacturer(s)

RFP ITEM NO.	NAME	BUSINESS ADDRESS

6.2 Foreign Manufacturer(s):

RFP ITEM NO.	NAME	BUSINESS ADDRESS

**7 IMPORTED CONTENT**

The Respondents must state hereunder the value and percentage of the imported content as well as the country of origin in respect of each item tendered for:

RFP ITEM NO / DESCRIPTION.	VALUE	% COST	COUNTRY OF ORIGIN

Note: Where more than one country is applicable to one item, the Respondents must furnish this information separately.

**8 EXCHANGE AND REMITTANCE**

The attention of the Respondents is directed to clause 16 [Exchange and Remittance] of the General Bid Conditions. If Transnet is requested by the Respondent to effect payment overseas direct to the Respondent's principal or supplier, which is not a registered South African Company please complete the details below, using the rate of exchange published by the South African Reserve Bank 7 [seven] calendar days before the closing date of this RFP:

8.1 ZAR 1.00 [South African currency] being equal to \_\_\_\_\_ [foreign currency]

8.2 \_\_\_\_\_ % in relation to tendered price(s) to be remitted overseas by Transnet

8.3 \_\_\_\_\_ [Name of country to which payment is to be made]

8.4 Beneficiary details:

Name [Account holder] \_\_\_\_\_

Bank [Name and branch code] \_\_\_\_\_

Swift code \_\_\_\_\_

Country \_\_\_\_\_

8.5 \_\_\_\_\_ [Applicable base date of Exchange Rate used]

Respondents are advised that should a contract be awarded for deliveries on an "as and when required" basis, any future remittance(s) to overseas principals/suppliers, as instructed above, will be based on the currency rate of exchange related to the contractual price of the Goods at that time.

Respondents should note that Transnet would prefer to receive fixed price offers expressed in South African Rand [ZAR].

**9 NATIONAL RAILWAY SAFETY REGULATOR ACT**

In compliance with the National Railway Safety Regulator Act, 16 of 2002, the successful Respondent [the Supplier] shall ensure that the Goods to be supplied to Transnet, under the terms and conditions of a contract between the parties, comply fully with the specifications as set out in Annexure (iii) [Specifications and Drawings] of this RFP, and shall also adhere to railway safety requirements and/or

regulations [as applicable]. Permission for the engagement of a subcontractor by the Supplier, as applicable, both initially and during the course of a contract, shall be subject to a review of the capability of the proposed subcontractor to comply with the specified railway safety requirements and/or regulations. The Supplier and/or its subcontractor shall grant Transnet access, during the term of the contract, to review any safety-related activities, including the coordination of such activities across all parts of the organisation.

**Accepted:**

<b>YES</b>	
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<b>NO</b>	
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**10 SERVICE LEVELS**

10.1 An experienced national account representative(s) is required to work with Transnet's procurement department. [No sales representatives are needed for individual department or locations]. Additionally, there shall be a minimal number of people, fully informed and accountable for this agreement.

10.2 Transnet will have quarterly reviews with the Supplier's account representative on an on-going basis.

10.3 Transnet reserves the right to request that any member of the Supplier's team involved on the Transnet account be replaced if deemed not to be adding value for Transnet.

10.4 The Supplier guarantees that it will achieve a 95% [ninety-five per cent] service level on the following measures:

- a) Random checks on compliance with quality/quantity/specifications
- b) On-time delivery

If the Supplier does not achieve this level as an average over each quarter, Transnet will receive a 1.5% [one and a half per cent] rebate on quarterly sales payable in the next quarter

10.5 The Supplier must provide a telephone number for customer service calls.

10.6 Failure of the Supplier to comply with stated service level requirements will give Transnet the right to cancel the contract in whole, without penalty to Transnet, giving 30 [thirty] calendar days' notice to the Supplier of its intention to do so.

**Acceptance of Service Levels:**

<b>YES</b>	
------------	--

<b>NO</b>	
-----------	--

**11 RISK**

Respondents must elaborate on the control measures put in place by their entity, which would mitigate the risk to Transnet pertaining to potential non-performance by a Supplier, in relation to:

**11.1 Quality and specification of Goods delivered:**

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**11.2 Continuity of supply:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

11.3 **Compliance with the Occupational Health and Safety Act, 85 of 1993:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**12 REFERENCES**

Please indicate below a minimum of *Four (4)* company names and contact details of previous and/or existing customers whom Transnet may contact to seek third party evaluations of your service levels:

NAME OF COMPANY	CONTACT PERSON	TELEPHONE

**13 FINANCIAL STABILITY**

Respondents are required to submit their latest audited financial statements for the past 3 years with their Proposal in order to enable Transnet to establish financial stability.

SIGNED at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

SIGNATURE OF WITNESSES

ADDRESS OF WITNESSES

1 \_\_\_\_\_  
Name \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

2 \_\_\_\_\_  
Name \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE: \_\_\_\_\_

NAME: \_\_\_\_\_

DESIGNATION: \_\_\_\_\_

**RFP FOR THE  
SUPPLY AND DELIVER RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE YEARS  
ON AN "AS AND WHEN REQUIRED BASIS**

**Section 4: PROPOSAL FORM AND LIST OF RETURNABLE DOCUMENTS**

I/We \_\_\_\_\_  
[name of entity, company, close corporation or partnership] of [full address]

\_\_\_\_\_

\_\_\_\_\_

carrying on business trading/operating as

represented by \_\_\_\_\_  
in my capacity as \_\_\_\_\_  
being duly authorised thereto by a Resolution of the Board of Directors or Members or Certificate of Partners,  
dated \_\_\_\_\_ to enter into, sign execute and complete any documents relating to this proposal and  
any subsequent Agreement. The following list of persons are hereby authorised to negotiate on behalf of the  
abovementioned entity, should Transnet decide to enter into Post Tender Negotiations with shortlisted bidder(s).

FULL NAME(S)	CAPACITY	SIGNATURE
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

I/We hereby offer to supply the abovementioned Goods at the prices quoted in the schedule of prices in accordance with the terms set forth in the documents listed in the accompanying schedule of RFP documents.

I/We agree to be bound by those conditions in Transnet's:

- (i) Terms and Conditions of Contract - Goods
- (ii) General Bid Conditions – Goods; and
- (iii) any other standard or special conditions mentioned and/or embodied in this Request for Proposal.

I/We accept that unless Transnet should otherwise decide and so inform me/us in the letter of award/intent, this Proposal [and, if any, its covering letter and any subsequent exchange of correspondence], together with Transnet's acceptance thereof shall constitute a binding contract between Transnet and me/us.

Should Transnet decide that a formal contract should be signed and so inform me/us in a letter of intent [the **Letter of Intent**], this Proposal [and, if any, its covering letter and any subsequent exchange of correspondence] together with Transnet's Letter of Intent, shall constitute a binding contract between Transnet and me/us until the formal contract is signed.

\_\_\_\_\_  
Respondent's Signature

\_\_\_\_\_  
Date & Company Stamp



I/We further agree that if, after I/we have been notified of the acceptance of my/our Proposal, I/we fail to enter into a formal contract if called upon to do so, or fail to commence the supply of Goods within 4 [four] weeks thereafter, Transnet may, without prejudice to any other legal remedy which it may have, recover from me/us any expense to which it may have been put in calling for Proposals afresh and/or having to accept any less favourable Proposal.

I/We accept that any contract resulting from this offer will be for a period of Three years only.

Furthermore, I/we agree to a penalty clause/s to be negotiated with Transnet, which will allow Transnet to invoke a penalty against us for non-compliance with material terms of this RFP including the delayed delivery of the Goods due to non-performance by ourselves, failure to meet Supplier Development and/or B-BBEE Improvement Plan commitments. A penalty of up to 100% of the outstanding portion of the Supplier Development commitment will be applied and Transnet reserves the right to set this off against any payment due to the Respondent. In addition, I/we agree that non-compliance with any of the material terms of this RFP, including those mentioned above, will constitute a material breach of contract and provide Transnet with cause for cancellation.

#### ADDRESS FOR NOTICES

The law of the Republic of South Africa shall govern any contract created by the acceptance of this RFP. The *domicilium citandi et executandi* shall be a place in the Republic of South Africa to be specified by the Respondent hereunder, at which all legal documents may be served on the Respondent who shall agree to submit to the jurisdiction of the courts of the Republic of South Africa. Foreign Respondents shall, therefore, state hereunder the name of their authorised representative in the Republic of South Africa who has the power of attorney to sign any contract which may have to be entered into in the event of their Proposal being accepted and to act on their behalf in all matters relating to such contract.

Respondent to indicate the details of its *domicilium citandi et executandi* hereunder:

Name of Entity:

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Facsimile:

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Address:

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#### NOTIFICATION OF AWARD OF RFP

As soon as possible after approval to award the contract(s), the successful Respondent [**the Supplier**] will be informed of the acceptance of its Proposal. Unsuccessful Respondents will be advised in writing of the name of the successful Supplier and the reason as to why their Proposals have been unsuccessful, for example, in the category of price, delivery period, quality, B-BBEE status or for any other reason.

#### VALIDITY PERIOD

Transnet requires a validity period of 120[one hundred and twenty] Business Days 13 January 2016 [from closing date] against this RFP.

Respondent's Signature

Date & Company Stamp

**NAME(S) AND ADDRESS / ADDRESSES OF DIRECTOR(S) OR MEMBER(S)**

The Respondent must disclose hereunder the full name(s) and address(s) of the director(s) or members of the company or close corporation [C.C.] on whose behalf the RFP is submitted.

- (i) Registration number of company / C.C. \_\_\_\_\_
  - (ii) Registered name of company / C.C. \_\_\_\_\_
  - (iii) Full name(s) of director/member(s)                      Address/Addresses                      ID Number(s)
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**RETURNABLE DOCUMENTS**

All Sections, as indicated in the footer of each page, must be signed, stamped and dated by the Respondent.

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

**a) Mandatory Returnable Documents**

*Failure to provide all mandatory Returnable Documents at the closing date and time of this tender will result in a Respondent's disqualification. Bidders are therefore urged to ensure that all these documents are returned with their Proposals.*

Please confirm submission of the mandatory Returnable Documents detailed below by so indicating [Yes or No] in the table below:

MANDATORY RETURNABLE DOCUMENTS	SUBMITTED [Yes/No]
SECTION 3 : Pricing and Delivery Schedule	
Technical product approval (Sample submission)	
<ul style="list-style-type: none"> <li>• UHF Triband Antenna</li> <li>• VHF Triband Antenna</li> </ul>	
- ICASA approval certificate	
- Dealers License	
- Technical qualifications in RF Engineering (Electronics or Communications) or equivalent	
- Manuals and cables for both the UHF and VHF triband antennas	
SECTION 10 : Declaration of Supplier Development Commitments	

**b) Essential Returnable Documents**

In addition to the requirements of section (a) above, Respondents are further required to submit with their Proposals the following **essential Returnable Documents** as detailed below.

*Failure to provide all essential Returnable Documents may result in a Respondent's disqualification at Transnet's sole discretion. Bidders are therefore urged to ensure that all these documents are returned with their Proposals.*

Please confirm submission of these essential Returnable Documents by so indicating [Yes or No] in the table below:

\_\_\_\_\_  
Respondent's Signature

\_\_\_\_\_  
Date & Company Stamp

ESSENTIAL RETURNABLE DOCUMENTS & SCHEDULES	SUBMITTED [Yes or No]
Receipt for payment of RFP documents [paragraph 1]	
SECTION 2: Annexure A Clause by clause compliance	
SECTION 4 : Proposal Form and List of Returnable documents	
<ul style="list-style-type: none"> <li>- Valid and original, or a certified copy, of your entity's B-BBEE Accreditation Certification as per the requirements stipulated in the B-BBEE Claims Form Section 7. Note: failure to provide these required documents at the closing date and time of the RFP will result in an automatic score of zero being allocated for preference</li> <li>- 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</li> <li>- Latest Financial Statements signed by your Accounting Officer or latest Audited Financial Statements plus 3 previous years</li> </ul>	
SECTION 8 : Certificate of attendance of compulsory RFP Briefing	
Original and valid Tax Clearance Certificate [Consortia / Joint Ventures must submit a separate Tax Clearance Certificate for each party]	
ANNEXURE B : Supplier Development Value Summary	
SECTION 5 : RFP Declaration and Breach of Law Form	
SECTION 7 : B-BBEE Preference Claim Form	
ANNEXURE C : Supplier Development Plan	
ANNEXURE H: Declaration certificate for local production and content [FORM SBD 6.2]	
ANNEXURE I: Local content declaration: Summary schedule	

**c) Additional Documents**

In addition to the requirements of paragraphs (a) and (b) above, Respondents are further requested to submit with their Proposals the following **additional documents** as detailed below. Please confirm submission of these additional documents by so indicating [Yes or No] in the table below:

ADDITIONAL DOCUMENTS	SUBMITTED [Yes or No]
ANNEXURE D : B-BBEE Improvement Plan	

**CONTINUED VALIDITY OF RETURNABLE DOCUMENTS**

The successful Respondent will be required to ensure the validity of all returnable documents, including but not limited to its Tax Clearance Certificate and valid B-BBEE Verification Certificate, for the duration of any contract emanating from this RFP. Should the Respondent be awarded the contract [**the Agreement**] and fail to present Transnet with such renewals as and when they become due, Transnet shall be entitled, in addition to any other rights and remedies that it may have in terms of the eventual Agreement, to terminate such Agreement forthwith without any liability and without prejudice to any claims which Transnet may have for damages against the Respondent.

Respondent's Signature

Date & Company Stamp

**By signing this certificate the Respondent is deemed to acknowledge that he/she has made himself/herself thoroughly familiar with, and agrees with all the conditions governing this RFP, including those contained in any printed form stated to form part hereof, including but not limited to the documents stated below and Transnet SOC Ltd will recognise no claim for relief based on an allegation that the Respondent overlooked any such condition or failed properly to take it into account for the purpose of calculating tendered prices or otherwise.**

Bidders furthermore agree that Transnet SOC Ltd shall recognise no claim from them for relief based on an allegation that they have overlooked any RFP/contract condition or failed to take it into account for the purpose of calculating their offered prices or otherwise.

Bidders accept that an obligation rests on them to clarify any uncertainties regarding any bid which they intend to respond on, before submitting the bid. The Bidder agrees that he/she will have no claim based on an allegation that any aspect of this RFP was unclear but in respect of which he/she failed to obtain clarity.

The bidder understands that his/her Bid will be disqualified if the Certificate of Acquaintance with RFP documents included in the RFP as a returnable document, is found not to be true and complete in every respect.

- 1 General Bid Conditions\*
- 2 Terms and Conditions of Contract for the supply of Goods to Transnet\*
- 3 Supplier Integrity Pact\*
- 4 Non-disclosure Agreement\*
- 5 Specifications and drawings included in this RFP
- 6 Supplier Development initiatives included in this RFP
- 7 Vendor Application Form\* and all supporting documents (first time vendors only)

Alternatively, for all existing vendors, please provide vendor number(s) here:

Transnet Operating Division	Unique Vendor Number	Yes / No
Transnet Group		
TFR, etc.		

In the Yes/No column above, please confirm that all the information e.g. company address and contact details, banking details etc. are still correct as at the time of allocation of the vendor number(s).

\*(available on Transnet's website or upon request)

SIGNED at \_\_\_\_\_ on this \_\_\_\_ day of \_\_\_\_\_ 20\_\_

SIGNATURE OF WITNESSES

ADDRESS OF WITNESSES

1 \_\_\_\_\_  
Name \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Respondent's Signature

Date & Company Stamp

2 \_\_\_\_\_

Name \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE: \_\_\_\_\_

NAME: \_\_\_\_\_

DESIGNATION: \_\_\_\_\_

**"PREVIEW COPY ONLY"**

**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
YEARS ON AN "AS AND WHEN REQUIRED BASIS**

**Section 5: RFP DECLARATION AND BREACH OF LAW FORM**

NAME OF ENTITY: \_\_\_\_\_

We \_\_\_\_\_ do hereby certify that:

1. Transnet has supplied and we have received appropriate responses to any/all questions [as applicable] which were submitted by ourselves for RFP Clarification purposes;
2. we have received all information we deemed necessary for the completion of this Request for Proposal [RFP];
3. we have been provided with sufficient access to the existing Transnet facilities/sites and any and all relevant information relevant to the services as well as Transnet information and Employees, and has had sufficient time in which to conduct and perform a thorough due diligence of Transnet's operations and business requirements and assets used by Transnet. Transnet will therefore not consider or permit any pre- or post-contract verification or any related adjustment to pricing, service levels or any other provisions/conditions based on any incorrect assumptions made by the Respondent in arriving at his Bid Price.
4. at no stage have we received additional information relating to the subject matter of this RFP from Transnet sources, other than information formally received from the designated Transnet contact(s) as nominated in the RFP documents;
5. we are satisfied, insofar as our entity is concerned, that the processes and procedures adopted by Transnet in issuing this RFP and the requirements requested from Bidders in responding to this RFP have been conducted in a fair and transparent manner; and
6. furthermore, we declare that a family, business and/or social relationship **exists / does not exist** [delete as applicable] between an owner / member / director / partner / shareholder of our entity and an employee or board member of the Transnet Group including any person who may be involved in the evaluation and/or adjudication of this Bid.
7. In addition, we declare that an owner / member / director / partner / shareholder of our entity **is / is not** [delete as applicable] an employee or board member of the Transnet Group.
8. If such a relationship as indicated in paragraph 5 and/or 6 exists, the Respondent is to complete the following section:

FULL NAME OF OWNER/MEMBER/DIRECTOR/  
PARTNER/SHAREHOLDER:

ADDRESS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Indicate nature of relationship with Transnet:

\_\_\_\_\_

[Failure to furnish complete and accurate information in this regard will lead to the disqualification of a response and may preclude a Respondent from doing future business with Transnet]

9. We declare, to the extent that we are aware or become aware of any relationship between ourselves and Transnet [other than any existing and appropriate business relationship with Transnet] which could unfairly advantage our entity in the forthcoming adjudication process, we shall notify Transnet immediately in writing of such circumstances.
10. We accept that any dispute pertaining to this Bid will be resolved through the Ombudsman process and will be subject to the Terms of Reference of the Ombudsman. The Ombudsman process must first be exhausted before judicial review of a decision is sought.
11. We further accept that Transnet reserves the right to reverse an award of business or decision based on the recommendations of the Ombudsman without having to follow a formal court process to have such award or decision set aside.

**BREACH OF LAW**

12. We further hereby certify that I/we (the bidding entity and/or any of its directors, members or partners) **have/have not been** [delete as applicable] found guilty during the preceding 5 [five] years of a serious breach of law, including but not limited to a breach of the Competition Act, 89 of 1998, by a court of law, tribunal or other administrative body. The type of breach that the Respondent is required to disclose excludes relatively minor offences or misdemeanours, e.g. traffic offences. This includes the imposition of an administrative fine or penalty.

Where found guilty of such a serious breach, please disclose:

NATURE OF BREACH:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DATE OF BREACH: \_\_\_\_\_

Furthermore, I/we acknowledge that Transnet SOC Ltd reserves the right to exclude any Respondent from the bidding process, should that person or entity have been found guilty of a serious breach of law, tribunal or regulatory obligation.

SIGNED at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

For and on behalf of _____ duly authorised hereto	AS WITNESS:
Name:	Name:
Position:	Position:
Signature:	Signature:
Date:	Registration No of Company/CC
Place:	Registration Name of Company/CC

--	--

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**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
YEARS ON AN "AS AND WHEN REQUIRED BASIS**

**Section 6: RFP CLARIFICATION REQUEST FORM**

RFP No: HOAC-HO-18044

RFP deadline for questions / RFP Clarifications: Before 12:00 on 15 July 2015

TO: Transnet SOC Ltd  
ATTENTION: Londiwe Shabalala  
EMAIL: Londiwe.Shabalala@transnet.net  
DATE: \_\_\_\_\_  
FROM: \_\_\_\_\_

RFP Clarification No [to be inserted by Transnet]

**REQUEST FOR RFP CLARIFICATION**

\_\_\_\_\_  
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Respondent's Signature

Date & Company Stamp

**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
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**Section 7: B-BBEE PREFERENCE POINTS CLAIM FORM**

This preference form contains general information and serves as a claim for preference points for Broad-Based Black Economic Empowerment [B-BBEE] Status Level of Contribution.

**1. INTRODUCTION**

- 1.1 A total of 10 preference points shall be awarded for B-BBEE Status Level of Contribution.
- 1.2 Failure on the part of a Bidder to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System [SANAS] or a Registered Auditor approved by the Independent Regulatory Board of Auditors [IRBA] or an Accounting Officer as contemplated in the Close Corporation Act [CCA] together with the bid will be interpreted to mean that preference points for B-BBEE Status Level of Contribution are not claimed.
- 1.3 Transnet reserves the right to require of a Bidder, either before a Bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by Transnet.

**2. GENERAL DEFINITIONS**

- 2.1 "**all applicable taxes**" include value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- 2.2 "**B-BBEE**" means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- 2.3 "**B-BBEE status of contributor**" means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- 2.4 "**Bid**" means a written offer in a prescribed or stipulated form in response to an invitation by Transnet for the provision of goods, works or services;
- 2.5 "**Broad-Based Black Economic Empowerment Act**" means the Broad-Based Black Economic Empowerment Act, 2003 [Act No. 53 of 2003];
- 2.6 "**comparative price**" means the price after the factors of a non-firm price and all unconditional discounts that can be utilised have been taken into consideration;
- 2.7 "**consortium or joint venture**" means an association of persons for the purpose of combining their expertise, property, capital, efforts, skills and knowledge in an activity for the execution of a contract;
- 2.8 "**contract**" means the agreement that results from the acceptance of a bid by Transnet;
- 2.9 "**EME**" means any enterprise with an annual total revenue of R5 [five] million or less as per the 2007 version of the B-BBEE Codes of Good Practice and means any enterprise with an annual total revenue of R10 [ten] million or less as per the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928;

- 2.10 **"firm price"** means the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs and excise duty and any other duty, levy, or tax, which, in terms of the law or regulation, is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;
- 2.11 **"functionality"** means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;
- 2.12 **"non-firm prices"** means all prices other than "firm" prices;
- 2.13 **"person"** includes reference to a juristic person;
- 2.14 **"QSE"** means any enterprise with an annual total revenue between R5 [five] million and R35 [thirty five] million as per the 2007 version of the B-BBEE Codes of Good Practice and means any enterprise with an annual total revenue of between R10 [ten] million and R50 [fifty] million as per the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928
- 2.15 **"rand value"** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;
- 2.16 **"subcontract"** means the primary contractor's assigning or leasing or making out work to, or employing another person to support such primary contractor in the execution of part of a project in terms of the contract;
- 2.17 **"total revenue"** bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Empowerment Act and promulgated in the Government Gazette on 9 February 2007;
- 2.18 **"trust"** means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and
- 2.19 **"trustee"** means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.

### 3. ADJUDICATION USING A POINT SYSTEM

- 3.1 The Bidder obtaining the highest number of total points for the evaluation criteria as enumerated in Section 2 of the RFP will be awarded the contract, unless objective criteria justifies the award to another bidder.
- 3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.
- 3.3 Points scored will be rounded off to 2 [two] decimal places.
- 3.4 In the event of equal points scored, the Bid will be awarded to the Bidder scoring the highest number of preference points for B-BBEE.
- 3.5 However, when functionality is part of the evaluation process and two or more Bids have scored equal points including equal preference points for B-BBEE, the successful Bid will be the one scoring the highest score for functionality.
- 3.6 Should two or more Bids be equal in all respect, the award shall be decided by the drawing of lots.

#### 4. POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

- 4.1 In terms of the Preferential Procurement Regulations, 2011, preference points shall be awarded to a Bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of Points [Maximum 10]
1	10
2	9
3	8
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

- 4.2 Bidders who qualify as EMEs in terms of the 2007 version of the Codes of Good Practice must submit a certificate issued by an Accounting Officer as contemplated in the CCA or a Verification Agency accredited by SANAS or a Registered Auditor. Registered auditors do not need to meet the prerequisite for IRBA's approval for the purpose of conducting verification and issuing EME's with B-BBEE Status Level Certificates.
- 4.3 Bidders who qualify as EMEs in terms of the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928 are only required to obtain a sworn affidavit on an annual basis confirming that the entity has an Annual Total Revenue of R10 million or less and the entity's Level of Black ownership.
- 4.4 In terms of the 2007 version of the Codes of Good Practice, Bidders other than EMEs must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.
- 4.5 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 transitional period ending 30 April 2015. During the transitional period, companies may elect to be measured in terms of the Revised Codes or the 2007 version of the Codes. Companies which are governed by Sector-specific Codes will be measured in terms of those Sector Codes.
- 4.6 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 1 May 2015. Thereafter, Transnet will only accept B-BBEE certificates issued based on the Revised Codes.
- 4.7 In terms of the Revised Codes of Good Practice, Bidders who qualify as QSEs must comply with all the elements of B-BBEE for the purposes of measurement. QSEs that are at least 51% or 100% Black owned are only required to obtain a sworn affidavit on an annual basis confirming that the entity has an Annual Total Revenue of R50 million or less and the entity's Level of Black ownership. Large enterprises must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered

Auditor approved by IRBA or a Verification Agency accredited by SANAS.

- 4.8 A trust, consortium or joint venture will qualify for points for its B-BBEE status level as a legal entity, provided that the entity submits its B-BBEE status level certificate.
- 4.9 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- 4.10 Tertiary institutions and public entities will be required to submit their B-BBEE status level certificates in terms of the specialised scorecard contained in the B-BBEE Codes of Good Practice.
- 4.11 A person will not be awarded points for B-BBEE status level if it is indicated in the Bid documents that such a Bidder intends subcontracting more than 25% [twenty-five per cent] of the value of the contract to any other enterprise that does not qualify for at least the same number of points that such a Bidder qualifies for, unless the intended subcontractor is an EME that has the capability and ability to execute the subcontract.
- 4.12 A person awarded a contract may not subcontract more than 25% [twenty-five per cent] of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is subcontracted to an EME that has the capability and ability to execute the subcontract.
- 4.13 Bidders are to note that in terms of paragraph 2.6 of Statement 000 of the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928, any representation made by an entity about its B-BBEE compliance must be supported by suitable evidence or documentation. As such, Transnet reserves the right to request such evidence or documentation from Bidders in order to verify any B-BBEE recognition claimed.

**5. B-BBEE STATUS AND SUBCONTRACTING**

**5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:**

B-BBEE Status Level of Contributor \_\_\_\_\_ = \_\_\_\_\_ [maximum of 10 points]

Note: Points claimed in respect of this paragraph 5.1 must be in accordance with the table reflected in paragraph 4.1 above and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or a sworn affidavit in the case of an EME or QSE.

**5.2 Subcontracting:**

Will any portion of the contract be subcontracted? YES/NO [delete which is not applicable]

If YES, indicate:

- (i) What percentage of the contract will be subcontracted? .....%
- (ii) The name of the subcontractor .....
- (iii) The B-BBEE status level of the subcontractor .....
- (iv) Is the subcontractor an EME? YES/NO

**5.3 Declaration with regard to Company/Firm**

- (i) Name of Company/Firm.....
- (ii) VAT registration number.....

(iii) Company registration number.....

(iv) Type of Company / Firm [TICK APPLICABLE BOX]

Partnership/Joint Venture/Consortium

One person business/sole propriety

Close Corporations

Company (Pty) Ltd

(v) Describe Principal Business Activities

.....  
.....

(vi) Company Classification [TICK APPLICABLE BOX]

Manufacturer

Supplier

Professional Service Provider

Other Service Providers, e.g Transporter, etc

(vii) Total number of years the company/firm has been in business.....

#### BID DECLARATION

I/we, the undersigned, who warrants that he/she is duly authorised to do so on behalf of the company/firm, certify that points claimed, based on the B-BBEE status level of contribution indicated in paragraph 4 above, qualifies the company/firm for the preference(s) shown and I / we acknowledge that:

- (i) The information furnished is true and correct.
- (ii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 6 above, the contractor may be required to furnish documentary proof to the satisfaction of Transnet that the claims are correct.
- (iii) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, Transnet may, in addition to any other remedy it may have:
  - (a) disqualify the person from the bidding process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) restrict the Bidder or contractor, its shareholders and directors, and/or associated entities, or only the shareholders and directors who acted in a fraudulent manner, from obtaining business from Transnet for a period not exceeding 10 years, after the *audi alteram partem* [hear the other side] rule has been applied; and/or
  - (e) forward the matter for criminal prosecution.

**WITNESSES:**

- 1. ....
- 2. ....

SIGNATURE OF BIDDER

DATE:.....

COMPANY NAME: .....

ADDRESS.....

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**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
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**Section 8: CERTIFICATE OF ATTENDANCE OF COMPULSORY RFP BRIEFING**

It is hereby certified that –

1. \_\_\_\_\_

2. \_\_\_\_\_

Representative(s) of \_\_\_\_\_ *[name of entity]*

attended the RFP briefing in respect of the proposed Goods to be supplied in terms of this RFP on  
\_\_\_\_\_ 2015

\_\_\_\_\_  
TRANSNET'S REPRESENTATIVE

\_\_\_\_\_  
RESPONDENT'S REPRESENTATIVE

DATE \_\_\_\_\_

DATE \_\_\_\_\_

EMAIL \_\_\_\_\_

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**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
YEARS ON AN "AS AND WHEN REQUIRED BASIS**

**Section 9: SUPPLIER DEVELOPMENT INITIATIVES**

**1.1 Aim and Objectives**

Historically in South Africa there has been a lack of investment in infrastructure, skills and capability development and an inequality in the income distribution and wealth of a significant portion of the population. There have been a number of Government initiatives developed to address these challenges. In particular, the New Growth Path [NGP] and New Development Plan [NDP] aligns and builds on previous policies to ensure the achievement of Government's development objectives for South Africa. Transnet fully endorses and supports Government's New Growth Path policy.

The key focuses of the NGP include:

- increasing employment intensity of the economy
- addressing competitiveness
- balancing spatial development of rural areas and poorer provinces
- reducing the carbon intensity of the economy
- creating opportunities in improving regional and global cooperation
- enabling transformation that benefits a wider range of social actors in society e.g. workers, rural communities, youth and women

Transnet, as a State Owned Company [SOC], plays an important role to ensure these objectives are achieved. Therefore, the purchasing of goods and services needs to be aligned to Government's objectives for developing and transforming the local supply base. Transnet's mission is to transform its supplier base by engaging in targeted supplier development initiatives to support localisation and industrialisation whilst providing meaningful opportunities for Black<sup>2</sup> South Africans with a particular emphasis on:

- Youth [16 to 35 year olds]
- Black women
- People with disabilities
- Small businesses
- Rural integration

**1.2 Supplier Development [SD]**

To facilitate the implementation of Supplier Development initiatives, Transnet has adapted an existing framework from the Department of Public Enterprises [DPE]. This framework allows for a basic set of principles to be applied to appropriately targeted SD initiatives. Supplier development initiatives aim to build local suppliers who are competitive through building capability and capacity. Hence the framework has been termed the Increased Competitiveness, Capability and Capacity Supplier Development

---

<sup>2</sup> "Black" means South African Blacks, Coloureds and Indians, as defined in the B-BBEE Act, 53 of 2003

Classification Matrix [**IC<sup>3</sup> Matrix**]. Currently there are four quadrants of SD initiatives which Transnet considers according to the IC<sup>3</sup> Matrix. This RFP has been identified as strategic, involving high commercial leverage and high value.

As a prequalification criterion to participate in this bid, Respondents are required to provide a commitment that the monetary value of all SD initiatives to be undertaken by them will not be less than 5% [Five percent] for Exempted Micro Enterprises (EME's), 10% [Ten percent] Qualifying Small Enterprises (QSE's) and [15%] Large Enterprises (LE's) – 15% of the contract value.

Accordingly, Respondents are required to provide a commitment of the Supplier Development initiative they will undertake during the contract period in the **Supplier Development Value Summary**. In addition, Transnet requires that all Respondents submit a **Supplier Development Plan** demonstrating how they will discharge their commitments made in the Supplier Development Value Summary. The contract which will be concluded with the successful bidder will incorporate the SD undertakings made in the abovementioned documents as a term of the contract.

- a) For a detailed understanding of the IC<sup>3</sup> Matrix, the respective SD initiatives and their objectives, please refer to the "Supplier Development Guidelines" appended hereto as Annexure F. This document must be used as a guideline to complete the SD Plan.
- b) The following Supplier Development [SD] focus areas have been identified, namely:

Category	Description
New Skills development	Skills transfer & skills education which will occur as a result of the award of contract
Enterprise and Supplier Development	Encouragement for growth and the expansion of emerging local firms, through procurement and support mechanisms

*Green economy / carbon footprint: The potential reduction of the economy's carbon intensity [i.e. creation of a greener economy] should be regarded as a key priority within all the above SD Categories and for all proposed SD initiatives*

- c) The **Supplier Development Plan** is to be submitted as a separate document, developed in line with the criteria set out in the **Supplier Development Value Summary**. The Supplier Development Plan is a detailed narrative document explaining the Respondent's Bid value as summarised in the Supplier Development Value Summary. The SD Plan should outline the type of activities you intend to embark upon should you be awarded the contract. This SD Plan should also provide an overview of what you intend to achieve, when, and the mechanisms whereby you will achieve those objectives. The SD Value Summary and SD Plan will represent a binding commitment on the part of the successful Respondent.

Annexure B must be completed, indicating by cross-reference the detailed areas which have been addressed in your SD Plan for each of the evaluation criteria listed in paragraph 1.2 (b) above, together with the Value Indicators therefor.

Notes for completion of the SD Plan:

- (i) Respondents are required to address each of the aspects under the detailed SD Description as a minimum for submission. This is not an exhaustive list however, and Respondents must not be limited to these choices when compiling each section.
- (ii) Please provide detailed calculations to illustrate how your estimated Rand values have been derived.
- (iii) Respondents are required to provide an electronic copy [CD] of the completed Annexure C as part of the SD Plan submission.

### 1.3 Additional contractual requirements

Should a contract be awarded through this RFP process, the successful Respondent(s) [hereinafter referred to as **the Supplier**] will be contractually committed, *inter alia*, to the following conditions:

- a) The Supplier will be required to submit a **Supplier Development Implementation Plan** within 45 [forty-five] calendar days from the signature date of a Letter of Intent [LOI]. This Implementation Plan represents additional detail in relation to the SD Plan providing an explicit breakdown of the nature, extent, timelines and monetary value of the SD commitments which the Supplier proposes to undertake and deliver during the term of the contract. Specific milestones, timelines and targets will be recorded to ensure that the Implementation Plan is in line with Transnet's SD objectives and that implementation thereof is completed within the term of the contract.
- b) The Implementation Plan may require certain additions or updates to the initial SD Plan in order to ensure that Transnet is satisfied that development objectives will be met.
- c) The Supplier will need to ensure that the relevant mechanisms and procedures are in place to allow for access to information to measure and verify the Supplier's compliance with its stated SD commitments.
- d) The Supplier will be required to provide:
  - (i) monthly status updates to Transnet for each SD initiative. [Detailed requirements will be provided by Transnet];
  - (ii) quarterly status reports for Transnet and the DPE. [Detailed reporting requirements will be provided by Transnet]; and
  - (iii) a final Supplier Development report, to be submitted to Transnet prior to the expiry date of the contract, detailing delivery, implementation and completion of all SD components plus auditable confirmation of the Rand value contribution associated with each such SD commitment.
- e) All information provided by the Supplier in order to measure its progress against its stated targets will be auditable.
- f) The Supplier will be required to submit this Implementation Plan to Transnet in writing, within 45 [forty-five] calendar days after signature of a Letter of Intent [LOI], where after both parties must reach an agreement [signed by both parties] within 20 [twenty] calendar days. Transnet will reserve the right to reduce or increase the number of days in which the Supplier must submit its Implementation Plan if it is deemed reasonable, based on the degree of complexity of the SD initiative.

- g) The contract will be conditional on agreement being reached by the parties on the Implementation Plan submitted by the Supplier. Therefore failure to submit or thereafter to agree to the Implementation Plan within the stipulated timelines will result in the non-award of such a contract or termination thereof.
- h) Failure to adhere to the milestones and targets defined in an Implementation Plan may result in the invocation of financial penalties, to be determined at Transnet's discretion, as well as providing Transnet cause to terminate the contract in certain cases where material milestones are not being achieved.

#### 1.4 **Supplier Development Returnable Documents**

Attached herewith is the following documentation:

- **Declaration of Supplier Development Commitments – Section 11 [mandatory]**
- **SD Plan – Annexure C [essential]**
- **SD Value Summary – Annexure B [essential]**

*Respondents are to note whether the above mentioned documents are listed as mandatory or essential returnable documents in Section 4 to this RFP as failure to submit, or to submit an incomplete mandatory returnable document will result in disqualification of your Proposal. Failure to submit an essential returnable document may result in disqualification of your Proposal.*

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**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
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**Section 10: DECLARATION OF SUPPLIER DEVELOPMENT COMMITMENTS**

I/We \_\_\_\_\_

hereby **agree/do not agree** to commit that not less than 5% for EME'S, 10% for QSE'S and 15% for LE'S of the contract value will be spent cumulatively on Supplier Development Initiatives. This pre-qualification criterion must be discharged against the following Supplier Development categories as outlined in the Supplier Development Value Summary [Annexure B]:

		Tick
EME	5%	
QSE	10%	
LE	15%	

- Skills development
- Enterprise and Supplier Development

I/We do hereby certify that the Supplier Development commitments made in relation to this RFP are solely in relation to this transaction and are not duplicated in relation to any other contracts that I/we have secured with any other organ of state including other State Owned Companies.

Furthermore, I/we do hereby declare that this undertaking also applies to any other contracts that I may have secured with Transnet including other Transnet Operating Divisions/Specialist Units. For the purposes of verification of this undertaking, the following is a list of contracts with Supplier Development commitments that I/we have secured with Transnet:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNED at \_\_\_\_\_ on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

\_\_\_\_\_  
SIGNATURE OF WITNESS

\_\_\_\_\_  
SIGNATURE OF RESPONDENT

**RFP FOR THE  
SUPPLY AND DELIVER OF RADIO TRIBAND ANTENNAS (UHF & VHF) FOR A PERIOD OF THREE  
YEARS ON AN "AS AND WHEN REQUIRED BASIS**

**Section 11: B-BBEE IMPROVEMENT PLAN**

Transnet encourages its Suppliers to constantly strive to improve their B-BBEE rating and requests that Respondents submit a B-BBEE improvement plan. Respondents are therefore requested to indicate whether they will maintain or improve their BBBEE status over the contract period.

**Additional contractual requirements**

Should a contract be awarded through this RFP process, the successful Respondent(s) may be contractually committed, *inter alia*, to the following conditions:

- a) The original B-BBEE Improvement Plan may require certain additions or updates in order to ensure that Transnet is satisfied that developmental objectives will be met.
- b) The Supplier will need to ensure that the relevant mechanisms and procedures are in place to allow Transnet access to information to measure and verify the Supplier's compliance with its stated B-BBEE Improvement commitments.
- c) The Supplier will be required to provide:
  - (i) quarterly status reports for Transnet; and
  - (ii) a final B-BBEE Improvement Plan report, to be submitted to Transnet prior to the expiry date of the contract, detailing delivery, implementation and completion of all B-BBEE Improvement components.
- d) All information provided by the Supplier in order to measure its progress against its stated targets will be auditable.

Respondents are requested to submit their B-BBEE Improvement Plan as an **additional document** with their Proposals by completion of **Annexure D** appended hereto. *[Refer Annexure D for further instructions]*

## MECHANICAL AND ELECTRICAL SAFETY REQUIREMENTS FOR NEW THRI-BAND LOCOMOTIVE ROOF-MOUNTED ANTENNAS

### INDEX

	Page
1.0 Scope .....	2
3.0 Normative references .....	2
4.0 Abbreviations .....	2
5.0 Definitions .....	2
6.0 Introduction .....	2
7.0 General requirements of antenna .....	3
8.0 Performance requirements .....	3
8.1 Mechanical vibration requirement	
8.2 Mechanical impact requirement	
8.4 Dielectric requirements	
8.5 Requirements on high voltage safety	
9.0 Acknowledgements .....	5

Compiled and  
Reported by: S.E. Sibande  
Engineer



Approved by: L.O. Borchard  
Senior Engineer



Date issued: 08 September 2006

## 1.0 Scope

This specification defines Spoornet requirements for the mechanical and electrical safety requirements for roof-mounted antennas on locomotives.

This specification applies to new tri-band antennas, which will be installed on all type of locomotives that will operate under an electrical supply system with nominal voltages of 3kV DC and/or 25kV AC or 50kV AC. The specification does not cover the safety installation requirements such as vehicle gauge and electrical clearance requirements.

## 2.0 Note

Much of the content in this specification are abstracts from draft specification RSE/TE/SPC/0088. The draft specification shall supersede this specification once approved.

## 3.0 Normative references

Spoornet RSE/TE/SPC/0088	Draft specification for safety approval of and installation of roof mounted antennas on Spoornet locomotives
IEC 60077-1: 1999	Railway applications – Electric equipment for rolling stock
IEC 60243-1: 1998	Electrical strength of insulating materials – Test methods
Spoornet standard	Electrical safety instructions, 1999

## 4.0 Abbreviations

AC	Alternating current
DC	Direct current
ESI	Electrical safety instructions
HV	High voltage
GPS	Global positioning system
GSM	Global systems for mobile communication

## 5.0 Definitions

Tri-band	Wifi/GSM/GPS
Flashover	Loss of the insulating properties of the gas or liquid medium surrounding a test specimen and electrodes while exposed to electric stress, which causes the current in the test circuit to operate an appropriate circuit breaker

## 6.0 Introduction



Spoornet is to acquire tri-band antennas for signalling and telecommunication purposes. These antennas are to be rolled out on locomotives operating on 3kV DC and/or 25 kV AC in the near future and on the Iron Ore line (50 kV AC) in the long run. Since these tri-band antennas are to be installed long after the locomotives are in service, extra care has to be taken to ensure the antennas meet HV safety requirements as well as the mechanical safety requirements as called for in draft specification RSE/TE/SPC/0088.

## 7.0 General requirements of antenna

Table 1: List of general requirements on the antennas

Requirement	Description of requirement
<b>Identification</b>	Antenna must be properly labeled with manufactures name, antenna type or model number, the serial number of the antenna in numerals, contract number, date of manufacture and the Spoornet logo must appear on the nameplate.
<b>Maximum height of antenna</b>	The maximum height of antenna measured vertically between the top of the locomotive roof and the top of the antenna enclosure must not exceed 110 mm.
<b>Environmental conditions</b>	The design of antenna assembly must ensure compliance with the environmental conditions that are applicable to locomotives as set out below: <ul style="list-style-type: none"> <li>• Maximum altitude above sea level: 1 980 m.</li> <li>• Operating in a saline atmosphere with relative humidity as high as 86% non condensing.</li> <li>• Temperature range: -10<sup>o</sup>C to 50<sup>o</sup>C.</li> </ul>
<b>Insulation material</b>	The insulation material must be durable for the specified environmental and mechanical shock and vibration conditions. The material must maintain its insulation characteristics for the life of the antenna.
<b>UV tests on antenna cover</b>	Material of antenna enclosure must be UV stabilized
<b>Antenna earthing</b>	The antenna must be properly earthed as specified in clause 901.0 of the ESI. This requires that "All metal structures within a distance of 3 m from live overhead track equipment must be earthed. The antenna wiring must provide a secondary level of protection, with the earth wires thick enough to enable a potential fault current to safely flow to ground.

## 8.0 Performance requirements

### 8.1 Mechanical vibration requirement

The complete antenna assembly must be tested for compliance with the vibration requirements throughout the range of frequencies and acceleration levels experienced in service as described in the test method below.

### Test method

The complete antenna is fixed, in a suitable position and in the orientation that it will be mounted on the vehicle. A machine producing sinusoidal vibrations of adjustable amplitude and frequency must be used to simulate vibrations on the antenna structure. The excitation must be applied on the antenna-mounting base.

To detect the possible existence of a critical frequency, the frequency is progressively varied from 1 Hz to 50 Hz in increments of 1 Hz. The frequency is held at a particular setting for at least 30 seconds. Oscillation amplitude in millimeters is given by the following formulae

$$a = \frac{25}{f} \quad \text{for } 1 \text{ Hz} \leq f \leq 10 \text{ Hz}$$
$$a = \frac{250}{f^2} \quad \text{for } 10 \text{ Hz} \leq f \leq 50 \text{ Hz}$$

The test must be carried out in each of the three directions: Vertical direction, longitudinal direction and Lateral direction. In the event of resonance, the corresponding frequency must be maintained for at least five minutes to ensure that there are no harmful effects on the satisfactory operation of the antenna.

After the successful completion of the above test, the antenna must then be subjected to a sustained vibration test for a period of 2 hours. This will be at the critical (resonance) frequency or if such a frequency was not detected then a frequency of 10 Hz must be used. The test must be carried out in each of the three directions: Vertical direction, longitudinal direction and Lateral direction.

### Acceptance criteria

These tests will be considered successful if there is no resulting damage to the antenna assembly and if the insulated cover is still mechanically intact and forms mechanically a unit with the antenna base.

### **8.2 Mechanical impact requirement**

After completion of the vibration test an impact load must be applied to the antenna. The complete antenna is fixed, in a suitable position and in the orientation that it will be mounted on the vehicle. An impact load of +3g is applied by means of a pendulum to the top to the antenna enclosure. The test must be carried out separately for the vertical direction, the longitudinal direction and lateral direction.

### Acceptance criteria

There must be no physical damage to the antenna enclosure and the enclosure and the base must still form an integral unit mechanically.

### **8.3 Requirement on the degree of protection provided by the antenna**

The antenna enclosure shall ensure that the assembly is dust tight and protected against the ingress of water projected in jets from any direction. This requires that the antenna enclosure rating shall be not less than *IP65* and *IP68* as defined in IEC 60529.

#### 8.4 Dielectric requirements

Clause 5.6 of publication IEC 61133 requires that dielectric tests be performed on electrical equipment in order to test the insulation integrity. IEC 60077-1 is the most appropriate specification for test voltages to confirm the insulation integrity of the insulated antenna enclosure.

Since the antenna is roof mounted, the insulated enclosure must comply with the same insulation value as that of the locomotive roof equipment. The dielectric test voltages obtained from IEC 60077-1 are given in Table 2 below for the three type of electrification at Spoornet. For the dielectric test IEC 60077-1 requires that the AC test voltage be applied for one minute. There shall be no flash over, insulation breakdown or surface tracking.

Table 2: Summary of dielectric test voltages

	Line voltage: 3 kV DC	Line voltage: 25 kV AC	Line voltage: 50 kV AC
Dielectric requirement	2.5U+2000	2.2U+20000	2.2U+20000
Dielectric test voltage	9500 V AC	75000 V AC	130000 V AC

#### 8.5 Requirements on high voltage safety

The antenna has to be evaluated for high voltage safety in case of accidental contact with loose overhead equipment. These conditions are possible under abnormal operating conditions when defective or loose live overhead support structure equipment, e.g. steady arms, droppers, overhead wires or other such equipment may collide or come in contact with or drop onto the antenna.

Since the antenna is connected to low voltage equipment the design must ensure that under normal and abnormal conditions, the output voltage from the antenna conforms to the step and touch voltage values specified in Annexure 9.5 of the Spoornet ESI as follows:

- Shall not exceed 50 V under normal conditions.
- Shall not exceed 430 V for a duration of not longer than 100 ms under fault conditions.

#### 9.0 Acknowledgements

The author wishes to express his gratitude to Mr. W.A. Coetzee for his efforts to compile antenna comprehensive draft specification RSE/TE/SPC/0088 of which much of the material presented in this specification was extracted from.



**TRANSNET**

freight rail

## RAIL NETWORK TELECOMMUNICATIONS SPECIFICATION

**[SPECIFICATION FOR THE SUPPLY OF LOW  
PROFILE DC GROUNDED COMBINED VHF, UHF, GSM/  
Wi-Fi AND GPS TRAIN ANTENNAS]**

FUNCTION	TITLE & DIVISION	NAME	SIGNATURE	DATE
Updated by:	Chief Engineering Technician Rail Network- Telecoms	Nomaxabiso Mayoli		26/05/2015
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<b>I. DISTRIBUTION</b>	II
<b>II. DOCUMENT CHANGE HISTORY</b>	II
<b>III. CHANGES SINCE LAST REVISION</b>	II
<b>IV. ABBREVIATIONS, ACRONYMS AND DEFINITIONS</b>	II
1. SCOPE	1
2. SCHEDULE OF REQUIREMENTS	1
3. COMPLIANCE	1
4. SERVICE CONDITIONS	2
5. TECHNICAL REQUIREMENTS FOR ANTENNA	2
5.1 General Requirements Concerning Antenna Construction	2
5.2 UHF Antenna Specific Requirements	3
5.3 VHF Antenna Specific Requirements	5
5.4 GPS Antenna Specific Requirements	6
5.5 GSM/Wi-Fi Antenna Specific Requirements	7
6. QUALITY OF MATERIAL	8
7. EVALUATION	8
8. GENERAL	9
9. DRAWING OF ANTENNA FOOTPLATE	9

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## I. DISTRIBUTION

Once updated, a copy of the latest revision will be published in the document management system in use. E-mail to this effect will be sent to the relevant personnel or heads of department.

## II. DOCUMENT CHANGE HISTORY

ISSUE NO.	DATE ISSUED	ISSUED BY	HISTORY DESCRIPTION
1.00	December 2006	Project Services	New document
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## III. CHANGES SINCE LAST REVISION

CLAUSES	DESCRIPTION
1.	Scope

## IV. ABBREVIATIONS, ACRONYMS AND DEFINITIONS

ABBREVIATIONS AND ACRONYMS	DESCRIPTION
AC	Alternating current
dB	Decibel
dBd	Decibel dipole
dBr	Decibel Relative (Referring to a specific level or starting point)
DC	Direct current
GPS	Global Positioning System
GSM	Global System for Mobile Communications
VHF/UHF	Very High Frequency/Ultra High Frequency
VSWR	Voltage Standing Wave Ratio
Wi-Fi	Wireless-Fidelity
°	Degrees
mm	Millimetres
cm	Centimetres
MHz	Mega Hertz
GHz	Giga Hertz
K	Kilo
C	Celsius
km	Kilometre
kg	Kilograms
nyloc	nylon insert lock



## 1. SCOPE

- 1.1. This specification covers the requirements of Transnet for the supply of combined VHF, UHF (Bands: 406 - 430 MHz and 450 – 470MHz), GSM / Wi-Fi and GPS low profile train antennas.

## 2. SCHEDULE OF REQUIREMENTS

- 2.1. The equipment required is listed in the Schedule of Requirements. The tenderer's clause-by-clause statement of compliance shall also cover the relevant clauses in the Schedule of Requirements.
- 2.2. Any special requirements not covered by this specification will be included in the Schedule of Requirements.

## 3. COMPLIANCE

- 3.1 Tenderers must their offers in terms of this specification.
  - 3.1.1 Offers, which include deviations of a minor nature, not departing greatly from the specification will be considered at the discretion of Transnet.
- 3.2 Tenderers may submit alternative offers for equipment considered by them to be equal or better than that called for in the specification.
  - 3.2.1 Such alternative offers must be accompanied by full explanation supporting the tenderer's claim regarding the suitability of the equipment.
  - 3.2.2 Such alternative offers will be considered at the discretion of Transnet.
- 3.3 Tenderers must indicate, clause by clause, either that their offers comply in every respect with this specification, or if not, precisely how they differ.
- 3.4 A broad statement to the effect that the equipment is in accordance with this specification is not acceptable.
- 3.5 Failure to comply with the above requirements may preclude a tender from consideration.



## 4. SERVICE CONDITIONS

- 4.1 The equipment must be suitable for continuous operation under the following conditions:

Ambient temperature	:	-30°C to +75°C
Relative humidity	:	As high as 95%
Altitude	:	0 to 2000 metres
Air pollution	:	Heavily saline laden industrial and locomotive fumes containing metallic dust
Water	:	100 mm/hour rain when mounted correctly while the train is moving at 100 km/hour
Lightning	:	Severe
Vibration	:	Severe

- 4.2 All component parts, including wiring, must be manufactured and processed to ensure reliable operation under these conditions.

## 5. TECHNICAL REQUIREMENTS FOR ANTENNA

### 5.1 General Requirements Concerning Antenna Construction

- 5.1.1 The antenna construction must be such as to incorporate the functionality of the UHF + GSM/Wi-Fi+ GPS antenna into the same unit. Each of the antennas must have a separate connector, but all antennas must be incorporated into the same physical housing.
- 5.1.2 The antenna must be constructed for mounting on a metal train roof and mounting dimensions as per Figure 1.
- 5.1.3 Care must be taken to ensure easy access to the connectors while the antenna is mounted in position. Fly leads are not preferred. If fly leads cannot be avoided, it must be kept to a distance of less than 20cm. Flyleads must also be protected against chafing.
- 5.1.4 The mechanical dimensions of the antenna are as follows:
- |        |   |                   |
|--------|---|-------------------|
| Height | : | 110mm maximum     |
| Width  | : | or diameter 114mm |
| Mass   | : | 1, 2 kg maximum   |





- 5.1.5 All necessary mounting hardware, gaskets and seals must be supplied, including three mounting studs, 8mm thick x 3 cm long, including star washers and nyloc nuts. See figure 1 for location of mounting studs.
- 5.1.6 Where mounting studs are used, they must be waterproofed by means of O-rings or similar means. Tenderers must give full detail of the mechanism used.
- 5.1.7 The antennas must be insulated against sparking and other discharge from the electrified traction overhead wire as per report RS-2006/143.
- 5.1.8 If a protective cover or dome is used to cover the internal components of the antenna, it must be of good mechanical standard. The protective cover must have very little or no effect on the efficiency of the antenna.
- 5.1.9 The protective cover must be able to withstand the impact as per report RS-2006/143 under subclasses 8.2.
- 5.1.10 The protective cover must be able to withstand contact with sparks from the electrified traction overhead wires as per the report RS-2006/143 under sub clauses 8.4 and 8.5.
- 5.1.11 The antenna must be able to operate continuously at speeds of up to 150 km/hour.
- 5.1.12 The antenna must not be constructed of any materials that may pose a health risk to drivers, maintenance personnel or any other person that may come into contact with the antenna.
- 5.1.13 The antenna must not require routine maintenance.

## 5.2 UHF Antenna Specific Requirements

- 5.2.1 The antenna must be supplied cut and tuned for the frequencies specified and no field tuning must be necessary (406-430 and 450-470 MHz).
- 5.2.2 Transmit power to antenna will not exceed 25 watts.
- 5.2.3 The antenna must be suitable for operation on frequencies on the band specified in the on 5.2.1. Above. Tenderers must state bandwidth of the antenna offered.
- 5.2.4 The VSWR must not exceed 1, 5:1 max over the entire specified bandwidth.
- 5.2.5 The nominal impedance must be 50 ohms measured at the antenna terminal when mounted as specified.,
- 5.2.6 The antenna must be vertically polarised.



- 5.2.7 The material used for the construction of the antenna and mounting clamps etc. must be chosen and/or suitably treated so as to resist weathering and avoid corrosion due to dissimilar metals being in physical contact.
- 5.2.8 The antenna cable connector must be waterproofed by means of a rubber O-ring or similar arrangement. Tenderers are to give full details of how this is achieved.
- 5.2.9 Tenderers must submit full technical details, including, but not limited to, polar diagrams showing antenna radiation patterns, mass, wind rating and gain with their quotations. Tenderers must state the protection mechanism from lightning and contact with overhead electric line e.g. direct ground.

5.2.10 Antenna gain

5.2.10.1 The gain of the antenna in any direction must be taken to mean the ratio of:-

- i. the power received in the far-field in that direction by a reference test dipole antenna when a test signal is injected into the antenna-under-test while it is mounted on the roof of a locomotive.
- ii. to the power received at the same place in the far-field by the reference test dipole antenna when the test signal is injected into a half-wave dipole antenna mounted in free space at the same height and in the same position as the antenna-under-test, with the locomotive and the antenna-under-test removed, and all other test conditions the same. The half-wave dipole must be mounted one-half-wave-wavelength from the non-metallic, insulating support post.

5.2.10.2 The antenna must have an Omni-directional radiation pattern with a minimum gain of 0 dBd ( $\pm 1$  dB) in the horizontal plane (measured at antenna termination point).

5.2.10.3 The gain in the vertical plane for angles less than 30 degrees from the horizontal plane must not vary more than 1dB from the gain in the horizontal plane.

5.2.10.4 The gain must not vary more than  $\pm 1$ dB over the entire frequency band.



5.2.10.5 The radio antenna must be able to transmit at rated output and specified frequency, without affecting or de-sensing the GPS /GSM receivers/antenna system. Tenderers must provide documentary proof of this.

5.2.10.6 Certified radiation polar diagrams and VSWR readings must be provided with the tender.

5.2.10.7 The antenna connector must be suitable for the frequency of the antenna. The type of connector shall be 50 ohm "N" type female. If another type is proposed, full details must be provided.

### 5.3 VHF Antenna Specific Requirements

- 5.3.1 The antenna must be supplied cut and tuned for the frequencies specified and no field tuning must be necessary (136 to 174 MHz).
- 5.3.2 Transmit power to antenna will not exceed 25 watts.
- 5.3.3 The antenna must be suitable for operation on frequencies on the band specified in 5.3.1. Tenderers must state bandwidth of the antenna offered.
- 5.3.4 The VSWR must not exceed 1, 5:1 max over the entire specified bandwidth.
- 5.3.5 The nominal impedance must be 50 ohms measured at the antenna terminal when mounted as specified.
- 5.3.6 The antenna must be vertically polarised.
- 5.3.7 The material used for the construction of the antenna and mounting clamps etc. must be chosen and/or suitably treated so as to resist weathering and avoid corrosion due to dissimilar metals being in physical contact.
- 5.3.8 The antenna cable connector must be waterproofed by means of a rubber O-ring or similar arrangement. Tenderers are to give full details of how this is achieved.
- 5.3.9 Tenderers must submit full technical details, including, but not limited to, polar diagrams showing antenna radiation patterns, mass, wind rating and gain with their quotations. Tenderers must state the protection mechanism from lightning and contact with overhead electric line e.g. direct ground.
- 5.3.10 Antenna gain.
- 5.3.10.1 The gain of the antenna in any direction must be taken to mean the ratio of:-



- i. the power received in the far-field in that direction by a reference test dipole antenna when a test signal is injected into the antenna-under-test while it is mounted on the roof of a locomotive;
  - ii. to the power received at the same place in the far-field by the reference test dipole antenna when the test signal is injected into a half-wave dipole antenna mounted in free space at the same height and in the same position as the antenna-under-test, with the locomotive and the antenna-under-test removed, and all other test conditions the same. The half-wave dipole must be mounted one-half-wave-wavelength from the non-metallic, insulating support post.
- 5.3.10.2 The antenna must have an Omni-directional radiation pattern with a minimum gain of 0 dBd ( $\pm 1$  dB) in the horizontal plane (measured at antenna termination point).
- 5.3.10.3 The gain in the vertical plane for angles less than 30 degrees from the horizontal plane must not vary more than 1dB from the gain in the horizontal plane.
- 5.3.10.4 The gain must not vary more than  $\pm 1$ dB over the entire frequency band.
- 5.3.10.5 The radio antenna must be able to transmit at rated output and specified frequency, without affecting or de-sensing the GPS /GSM receivers/antenna system. Tenderers must provide documentary proof of this.
- 5.3.10.6 Certified radiation polar diagrams and VSWR readings must be provided with the tender.
- 5.3.10.7 The antenna connector must be suitable for the frequency of the antenna. The type of connector shall be 50 ohm "N" type female. If another type is proposed, full details must be provided.

#### 5.4 GPS Antenna Specific Requirements



- 5.4.1 The antenna must be suitable for the use with any GPS receiver unit in the 1, 2- 1, 6 GHz band.
- 5.4.2 The antenna must be DC protected, to prevent high voltage from entering the equipment connected to the antenna. This protection mechanism must prevent the GPS equipment from receiving high voltages due to accidental contact with wires of lightning strikes. Tenderers must indicate the proposed mechanism of protection.
- 5.4.3 The antenna must have a nominal impedance of 50 ohm.
- 5.4.4 The antenna cable connector must be waterproofed by means of a rubber O-ring or similar arrangement. Tenderers must give full details of how this is achieved.
- 5.4.5 The antenna must be suitable for operation on locomotives working under 25 k Volt AC, 50 k V AC and 3k Volt DC overhead cables and on diesel and diesel-electric locomotives.

## **5.5 GSM/Wi-Fi Antenna Specific Requirements**

- 5.5.1 The GSM and Wi-Fi elements can be a combination, covering the appropriate bands (GSM 900/1800/1900 MHz and Wi-Fi band 2, 4 -2, 5 GHz).
- 5.5.2 The antenna must be supplied cut and tuned for the frequencies specified and no field tuning must be necessary for both bands.
- 5.5.3 The antenna must be suitable for operation on frequencies in the band specified in the Schedule of Requirements. Tenderers must state bandwidth of the antenna offered.
- 5.5.4 The VSWR must not exceed 2:1 max over the entire specified bandwidth.
- 5.5.5 The nominal impedance must be 50 ohms measured at the antenna terminal when mounted as specified.
- 5.5.6 The antenna must be vertically polarised.
- 5.5.7 The materials used for the construction of the antenna and mounting clamps etc. must be chosen and/or suitably treated so as to resist weathering and avoid corrosion due to dissimilar metals being in physical contact.
- 5.5.8 The antenna cable connector must be waterproofed by means of a rubber O-ring or similar arrangement. Tenderers are to give full details of how this is achieved.



- 5.5.9 Tenderers must submit full technical details, including, but not limited to, polar diagrams showing antenna radiation patterns, mass, wind rating and gain with their quotations. Tenderers must state the protection mechanism from lightning and contact with overhead electric line e.g. direct ground.
- 5.5.10 The antenna must have an Omni-directional radiation pattern in the horizontal plane (measured at antenna termination point).
- 5.5.11 The gain in the vertical plane for angles less than 30 degrees from the horizontal plane must not vary more than 1dB from the gain in the horizontal plane.
- 5.5.12 The radio antenna must be able to transmit at rated output and specified frequency, without affecting or degrading the UHF / VHF receivers/antenna system. Tenderers must provide documentary proof of this.
- 5.5.13 Certified radiation polar diagrams and VSWR readings must be provided with the tender.
- 5.5.14 The antenna connector must be suitable for the frequency of the antenna. The type of connector shall be 50ohm FME/SMA type female in-line. If another type is proposed, full details must be provided.

## 6. QUALITY OF MATERIAL

All materials used must be of the best quality and of the class most suitable for the purpose for which it is required. Tenderers must quote the authorised standards to which the material or the equipment offered conforms.

## 7. EVALUATION

- 7.1 Tenderers shall be required to submit samples for test and evaluation purposes. The prototype must be available for evaluation within two weeks from the date it is requested. Tests conducted on the sample antenna may include high voltage tests, which may damage the antenna. The cost of the antenna will not be recoverable.
- 7.2 The supplier must provide specifications of the proposed antenna as well as design and test results on the antenna.



## 8. GENERAL

Technical matters in this specification which are not understood must be discussed with the nominated Transnet person before the closing date of the tender.

## 9. DRAWING OF ANTENNA FOOTPLATE

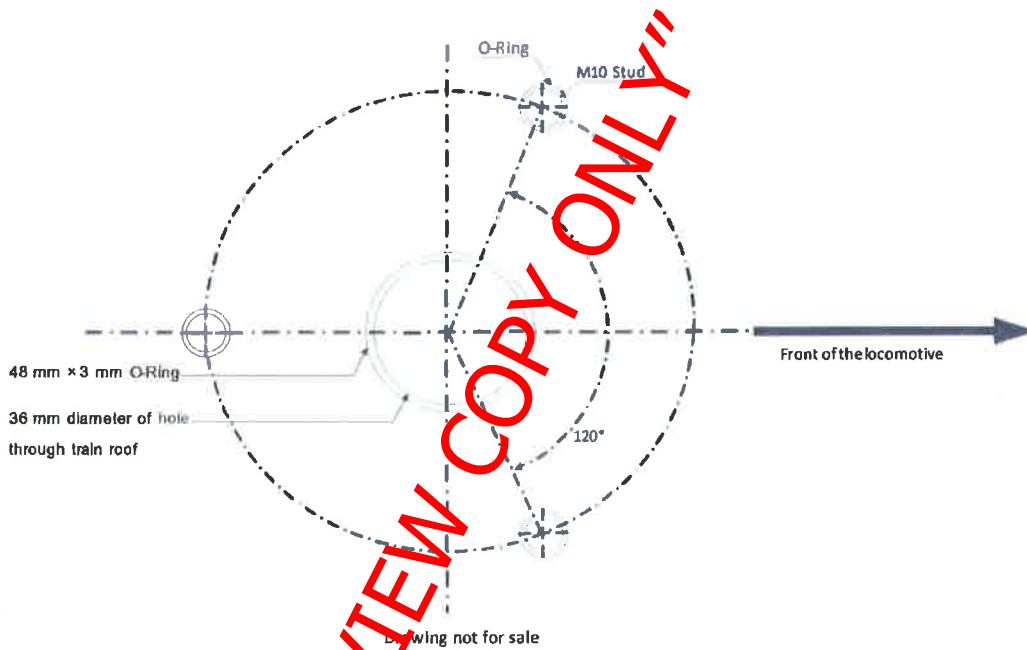


Figure 1: Antenna footplate

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