



**TRANSNET FREIGHT RAIL**, a division of

**TRANSNET SOC LTD**

Registration Number 1990/000900/30

[hereinafter referred to as **Transnet**]

**REQUEST FOR QUOTATION [RFQ] No HOAC-HO-13177**

**FOR THE PROVISION OF: PROVISION FOR THE ROOF MODIFICATION AND  
PANTOGRAPH INSTALLATION ON RAIL INSPECTION  
TROLLEYS FOR A PERIOD OF SIX MONTHS.**

**ISSUE DATE: 14 FEBRUARY 2014**

**BRIEFING DATE: 21 FEBRUARY 2014**

**BRIEFING TIME: 10: AM**

**CLOSING DATE: 18 MARCH 2014**

**CLOSING TIME: 10: AM**

**ON CLOSING DATE PLEASE SUBMIT TWO (2) DOCUMENTS ORIGINAL &  
COPY IN ONE ENVELOPE IT MUST BE INSCRIBED ON THE OUTSIDE  
WITH THE TENDER NUMBER AND THE CLOSING DATE.**



**COMPULSORY BRIEFING SESSION:**

A compulsory briefing session will be held at the following venue:

Time: 10:00

Date: 21 February 2014

Venue: Transnet Freight Rail, Inyanda House 2, 15 Girton Road,  
Barongwa boardroom, Parktown, Johannesburg.

The briefing session is compulsory and companies not attending **will be overlooked** during the tender awarding process.

**ATTENDANCE CERTIFICATE**

This is to certify that.....

Representative/s of .....

Has/have today attended the Tender briefing in respect of the proposed:

.....

TRANSNET'S REPRESENTATIVE TENDERER'S REPRESENTATIVE

DATE:.....

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## Section 1 NOTICE TO BIDDERS

Quotations which must be completed as indicated in Section 2 of this RFQ are to be submitted as follows:

**METHOD:** [hand/ post and/or courier]

**CLOSING VENUE:** The Secretary, Transnet Freight Rail, Acquisition Council, and Tender Box on the Ground floor, Inyanda House 1, 21 Wellington Road, and Parktown.

### 1 Responses to RFQ

Responses to this RFQ [**Quotations**] must not include documents or reference relating to any other quotation or proposal. Any additional conditions must be embodied in an accompanying letter.

### 2 Broad-Based Black Economic Empowerment [B-BBEE]

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

#### 2.1 B-BBEE Scorecard and Rating

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

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

The value of this bid is estimated to exceed R1 000 000 (all applicable taxes included); and therefore the **90/10** system shall be applicable. When Transnet invites prospective suppliers to submit Proposals for its various expenditure programmes, it requires Respondents to have their B-BBEE status verified in compliance with the Codes of Good Practice issued in terms of the Broad Based Black Economic Empowerment Act No. 53 of 2003.

The Department of Trade and Industry recently revised the Codes of Good Practice on 11 October 2013 [Government Gazette No. 36928]. The Revised Codes will replace the Black Economic Empowerment Codes of Good Practice issued on 9 February 2007. The Revised Codes provide for

a one year transitional period starting 11 October 2013. During the transitional period, companies may elect to be measured in terms of the Revised Codes or the 2007 version of the Codes. After the first year of the implementation of the Revised Codes, B-BBEE compliance will be measured in terms of the Revised Codes without any discretion. Companies which are governed by Sector-specific Codes will be measured in terms of those Sector Codes.

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

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

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

### 3 Communication

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

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

Name: Koketso Selowa  
0688

Email: [Koketso.selowa@transnet.net](mailto:Koketso.selowa@transnet.net) 011 584

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

Telephone 011 544 9486

Email: [prudence.nkabinde@transnet.net](mailto:prudence.nkabinde@transnet.net)

### 4 Tax Clearance

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

### 5 VAT Registration

The valid VAT registration number must be stated here: \_\_\_\_\_ [if applicable].

### 6 Legal Compliance

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

**7 Changes to Quotations**

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

**8 Pricing**

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

**9 Prices Subject to Confirmation**

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

**10 Negotiations**

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

**11 Binding Offer**

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

**12 Disclaimers**

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

- modify the RFQ's goods / service(s) and request Respondents to re-bid on any changes;
- reject any Quotation which does not conform to instructions and specifications which are detailed herein;
- disqualify Quotations submitted after the stated submission deadline;
- not necessarily accept the lowest priced Quotation;
- reject all Quotations if it so decides;
- place an order in connection with this Quotation at any time after the RFQ's closing date;
- award only a portion of the proposed goods / service/s which are reflected in the scope of this RFQ;
- split the award of the order/s between more than one Supplier/Service Provider; or
- make no award at all.

Transnet reserves the right to award business to the highest scoring bidder/s unless objective criteria justify the award to another bidder.

**13 Transnet's supplier integrity pact**

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

Respondents are required to familiarise themselves with the contents of the Integrity Pact which is available on the Transnet Internet site [[www.transnet.net/Tenders/Pages/default.aspx](http://www.transnet.net/Tenders/Pages/default.aspx)] or on request. Furthermore, Respondents are required to certify that they have acquainted themselves with all the

documentation comprising the Transnet Integrity Pact and that they fully comply with all the terms and conditions stipulated in the Transnet Supplier Integrity Pact as follows:

<b>YES</b>	
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<b>NO</b>	
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Should a Respondent need to declare previous transgressions or a serious breach of law in the preceding 5 years as required by Annexure A to the Integrity Pact, such declaration must accompany the Respondent's bid submission.

**14 Evaluation Criteria**

Transnet will utilise the following criteria] in choosing a Supplier/Service Provider, if so required:

Criterion/Criteria	Explanation
<b>Administrative responsiveness</b>	Completeness of response and returnable documents
<b>Substantive responsiveness</b>	<p>Prequalification criteria must be met and whether the Bid materially complies with the scope and/or specification given.</p> <p>Prequalification criteria must be met and whether the Bid materially complies with the scope and/or specification given Instruments to meet the exact specification as per the specification attached.</p> <ul style="list-style-type: none"> <li>• <b>Compliance to specification</b> Bidders are required to complete a submission template and submit proof of compliance to specifications.</li> <li>• <b>A Delivery schedule</b> This is incorporated in the project plan that forms part of the attached evaluation criterion.</li> </ul>
<b>Functionality Threshold</b>	As prescribed in terms of the Preferential Procurement Policy Framework Act (PPPFA), Act 5 of 2000 and its Regulations, Respondents are to note that functionality is included as threshold with a prescribed percentage threshold of <b>82%</b> . Compliance to specification / delivery schedule will be considered as part of the technical evaluation[complete Annexure F – Technical Questionnaire clause by clause compliance to specification ]
<b>Final weighted</b>	<ul style="list-style-type: none"> <li>• Pricing and price basis [firm] - whilst not the sole factor for consideration,</li> </ul>

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<p><b>evaluation based on 90/10 preference point system as indicated in paragraph 2</b></p>	<p>competitive pricing and overall level of unconditional discounts<sup>1</sup> will be critical</p> <ul style="list-style-type: none"> <li>• B-BBEE status of company - Preference points will be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table indicated in Annexure A.</li> </ul>
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**15 Validity Period**

Transnet desires a validity period of 90 [ninety] days from the closing date of this RFQ.  
 This RFQ is valid until \_\_\_\_\_.

**16 Banking Details**

BANK: \_\_\_\_\_  
 BRANCH NAME / CODE: \_\_\_\_\_  
 ACCOUNT HOLDER: \_\_\_\_\_  
 ACCOUNT NUMBER: \_\_\_\_\_

**17 Company Registration**

Registration number of company / C.C. \_\_\_\_\_  
 Registered name of company / C.C. \_\_\_\_\_

**18 Disclosure of Prices Quoted**

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

YES  NO

**19 Returnable Documents**

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

Respondents are required to submit with their Quotations the **mandatory Returnable Documents**, as detailed below.

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

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

\_\_\_\_\_

<sup>1</sup> Only unconditional discounts will be taken into account during evaluation. A discount which has been offered conditionally will, despite not being taken into account for evaluation purposes, be implemented when payment is effected.



Mandatory Returnable Documents	Submitted [Yes or No]
SECTION 2 : Quotation Form	
ANNEXURE :F: Technical Submission/Questionnaire clause by clause compliance to specification.	
ANNEXURE C :Technical requirements	

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

***Failure to provide all these Returnable Documents may result in a Respondent's disqualification. Respondents are therefore urged to ensure that all these documents are returned with their Quotations.***

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

Essential Returnable Documents	Submitted [Yes or No]
SECTION 1 : Notice to Bidders	
- Valid and original B-BBEE Verification Certificate or certified copy thereof [Large Enterprises and QSEs] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the RFQ will result in an automatic score of zero for preference	
- Valid and original B-BBEE certificate/sworn affidavit or certified copy thereof from auditor, accounting officer or SANAS accredited Verification Agency [EMEs] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the RFQ will result in an automatic score of zero being allocated for preference	
- 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	
- Original valid Tax Clearance Certificate [Consortia / Joint Ventures must submit a separate Tax Clearance Certificate for each party]	
- SECTION 3 : Standard Terms and Conditions of Contract for the Supply of Goods or Services to Transnet	
SECTION 4 : Vendor Application Form	
- Original cancelled cheque or bank verification of banking details	
- Certified copies of IDs of shareholder/directors/members [as applicable]	
- Certified copies of the relevant company registration documents from Companies and Intellectual Property Commission (CIPC)	
- Certified copies of the company's shareholding/director's portfolio	
- Entity's letterhead	
- Certified copy of VAT Registration Certificate [RSA entities only]	



Essential Returnable Documents	Submitted [Yes or No]
- Certified copy of valid Company Registration Certificate [if applicable]	
- A signed letter from Respondent's auditor or accountant confirming most recent annual turnover figures	
ANNEXURE A – B-BBEE Preference Points Claim Form	

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Respondent's Signature

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Date & Company Stamp

# RAIL NETWORK

## PROJECT SPECIFICATION

### Inspection Rail Motor Trolley Upgrade: Pantograph Installation

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Author:	Engineering Technician Small Plant & Equipment	Molefi Moeketsane	.....
Approved:	1 Senior Engineer 2 Technical and Legal Compliance	Hendrik Esterhuyse	.....
Authorised:	3 Principal Engineer Technical and Legal Compliance	Leonard Msibi	.....
		Date:	29 November 2013

Circulation Restricted To:  
 Transnet Freight Rail – Rail network  
 Approved Third Parties

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## 1. Scope and Tendering

### Scope

- 4.1 This specification covers the requirements for the inspection trolley upgrade within TFR.
- 4.2 The trolley shall be upgraded for better performance and to meet the heavy duty operational requirements of the railway environment.
- 4.3 Manufacturer shall take note of the requirements of this specification, have understanding of safety and operational efficiency as required.
- 4.4 For the purpose of this tender, Transnet Freight Rail shall provide items as per Annexure C of this document. This items shall be installed in the upgrading of the specific trolley. The trolley shall be upgraded to the design and functional requirements of this specification as per all drawings and documents attached to this specification. Onus lies with the contractor for the correctness of the completed work in the upgrade process.
- 4.5 The contractor's facilities must be of sufficient Size to accommodate the handling of the trolley cab and to perform the required manufacturing work. Access to the Contractor's Facilities must accommodate transport by truck and must facilitate Safe and easy loading and offloading with truck Mounted crane. Contractors to indicate if sub-contractors will be utilised and identify them for inspection and approval

### Tendering

- 4.6 Tenderer shall indicate compliance with this specification and submit offer based on the submission document or attached to this specification. The returnable document as attached under Annexure D and E shall be used for that purpose. All non-compliance statements shall be motivated.
- 4.7 Tenderers shall submit a project plan that satisfies the time frame as stipulated by TFR. The project plan shall indicate all the work breakdown structure with all the schedules, resources, costs, milestones etc. this plan shall be submitted with an organogram indicating all the personnel supporting the project directly and indirectly. The project shall be completed in 24 weeks. It shall take a maximum of two weeks to complete modifications on the first trolley, from second trolley onwards the contractor shall complete minimum of one trolley per week.
- 4.8 Tenderer shall submit a quotation for the complete upgrade per trolley as required in this specification. The quotation shall take into account the cost of part/components not supplied by TFR and transportation cost to and fro various TFR depots as indicated in this specification.
- 4.9 Failure to comply with clauses 1.6 to 1.8 could preclude a tenderer from consideration.

## 2. Operating Conditions

- 2.1 The trolley shall be operated during day and night.
- 2.2 The trolley shall be operated in all weather conditions at altitudes varying from sea level to 2000m above sea level, relative humidity 10% to 90% and atmospheric conditions which varies from heavily saline to dry and dusty.

2.3 Ambient temperature between -5°C to 50°C.

2.4 Dimensional limitations as per below:

2.4.1 Vehicle gauge: 1,065mm gauge track shown in Annexure 2 (Sht 1 of 2). Track gauge: nominal 1065mm, with a range of: -10mm+45mm

2.4.2 Minimum structure gauge: refer to Annexure A of this document (as shown in Annexure 1: Sht1,2,3 and 5 of 5).

### 3. Definitions and abbreviation

- 3.1 Fat-cat trolley: Diesel engine, self propelled railway infrastructure inspection trolley used in TFR capable of carrying a crew of 15 seated people.
- 3.2 Luxrailer: Diesel engine, self propelled railway infrastructure inspection trolley used in TFR capable of carrying a crew of 9 seated people.
- 3.3 TFR: Transnet Freight Rail
- 3.4 Pantograph: A suitably modified traction current collector with pneumatic cylinder and collector pan supplied with carbon strips used for 25 kV AC / 50 kV AC traction systems.
- 3.5 ADD device Automatic Drop Down device used to automatically drop the pantograph to avoid a hook-up
- 3.6 Insulator A substance that resists electric current.
- 6.

### 4. Features

- 4.1 The trolleys are fitted with a body generally to operational requirements, adapted to suit the trolley chassis for specified trolleys. (Refer to drawings as in this tender)
- 4.2 The trolleys are equipped with a diesel engine.
- 4.3 The engine has an automotive compressor used in the braking system of the trolley with an auxiliary port.
- 4.4 The system pressure is maintained at 8 bar
- 4.5 The trolley shall be fitted with a pantograph.

### 5. Capacity

- 5.1 Trolley has a crew of 9-15 people.

- 5.2 The sitting arrangement is as in drawings.
- 5.3 The trolley shall be capable of giving an indication/warning to the operator when a speed of 40km/h is exceeded while the pantograph is operated.

## 6. Upgrade works

### 6.1 Pre-installation works

- 6.1.1 The manufacturer shall remove all the attachments and cladding on the exterior side of the roof of the trolley before working on the roof frame.
- 6.1.2 The manufacturer shall prepare the roof frame structure for modification
- 6.1.3 The manufacturer shall take full responsibility and assure the correctness for the complete roof modification work on each trolley.

### 6.2 Modification and installations

#### 6.2.1 Cab roof structure/Frame

- 6.2.1.1 The existing structures are manufactured according to drawing BBF 0741 VER 1 for luxrailer and MTV170-174 for fat-cats.
- 6.2.1.2 The roof frames are manufactured from square tubing and square solid as specified on the drawings in this specification.
- 6.2.1.3 The frame shall be modified such that the roof structure is strengthened to handle the pantograph to be mounted on the roof structure.
- 6.2.1.4 The frame modifications shall be painted with one under-coat and two top-coats. The paint and procedure shall be approved by TFR.
- 6.2.1.5 All square tubing to be rust treated internally and externally with corrosion resistant material. The material shall be approved by TFR. Holes of 12mm dia. are required to inject rust treatment solution.
- 6.2.1.6 All attachments/accessories to be manufactured and/ fitted as required.
- 6.2.1.7 The pantograph sub-frame shall be manufactured as per drawing supplied.

#### 6.2.2 Cladding

- 6.2.2.1 Panels shall be manufactured from chromadek sheets with a thickness of 1 mm
- 6.2.2.2 A panel will consist of two chromadek plates with insulation in between the two chromadek layers for all panels above the trolley floor level.
- 6.2.2.3 Insulation with thickness 38 mm between panels above floor is required. The material to be polystyrene material. Panels and frame to be sealed with an approved sealing material to insulate and prevent area from moisture entry.
- 6.2.2.4 Panels are to be fitted to cover the entire roof frame structure.
- 6.2.2.5 The panels are to be riveted to the frame with Self Sealing Pop Rivets : 5mm x 15mm. Rivets to be equally spaced at maximum 75mm apart.
- 6.2.2.6 Panels must overlap each other with at least 30 mm. Contact area between overlap to be treated with an approved sealing material to ensure moisture entry prevention.

Cladding which will be overlapped by following sheet, to be fitted with dia. 3mm. x 12mm. length countersunk rivets.

- 6.2.2.7 Cladding that overlaps shall be from front to rear in length direction & from top to bottom in height direction.
- 6.2.2.8 Joints that cannot be overlaid to be fitted with 3mm countersunk rivets.
- 6.2.2.9 Joints that cannot be overlaid to be capped with half-round aluminium cover strip.
- 6.2.2.10 Front and rear top corners should be manufactured from chromadeck.
- 6.2.2.11 All holes/cut-outs for front lights, rear lights, ventilators and front crank handle shall be cut after cladding prior to preparation for painting. Sizes & Positions of all referred holes/cut-outs shall be as per related drawings and sample trolley.
- 6.2.2.12 Cladding shall be completed as per this cladding requirements.

### 6.3 Air supply system

- 6.3.1 The air system shall be installed as per TFR requirements.
- 6.3.2 A valve push-pull switch shall be installed on the side of the dashboard for pantograph operations.
- 6.3.3 2 x 50mm red lead lamp to be coupled to the pantograph system, one on the dashboard and the other on the turntable. This shall indicate when the pantograph is operational during engaging and disengaging levels.
- 6.3.4 Storage tank shall be of a 500kPa capacity.
- 6.3.5 A schematic diagram to be provided for the air system.

### 6.4 Painting the Cab

- 6.4.1 The trolley shall be painted as required in this specification.
- 6.4.2 The whole trolley must be painted using Paint type 2K or similar with an approved paint procedure.
- 6.4.3 All fittings, checker plate, stickers and windows must be removed or protected before painting.
- 6.4.4 Appropriate preparation of all surfaces including sanding and flattening.
- 6.4.5 Trolley to be inspected by TFR after preparation.
- 6.4.6 Two primer (MS primer) coats to be applied & trolley to be inspected by TFR.
- 6.4.7 Two top coats
- 6.4.8 Colour coding shall be as follows:
  - Top/Roof : Gloss white
  - Front, Side : Raven Black
  - Front, Side : Gloss White
  - Front, Side : Grey + clear coat

### 6.5 Pantograph

- 6.5.1 The trolleys shall be equipped with a pantograph fully insulated for 25kV system and equipped with an ADD.
- 6.5.2 The pantograph shall be mounted on the trolleys as per drawings provided and all drawings read in conjunction with this specification.



- 6.5.3 The manufacturer to ensure that the pantograph pan shall be the highest point of the trolley at 4m above rail.
- 6.5.4 The pantograph shall not be used as a current collector for this application as is the case in the traction technology, yet it shall be in contact with the live traction wire when in operation. The insulation requirement must be properly installed to meet safety requirements of this specification.
- 6.5.5 Pantographs with porcelain insulators shall be used on the installations. Pantographs and insulators shall be supplied by TFR.

## 7. Safety

- 7.1 The trolley shall be fully insulated for the operation under the 50kV traction system.
- 7.2 All the systems with a potential to conduct current shall be insulated.
- 7.3 The pantograph shall be fully insulated.
- 7.4 The insulation shall be tested.
- 7.5 All the metal work should be effectively earthed via the wheel sets to the rail. This shall conform to the RRV earth specification as attached in Annexure F.

7.

## 8. Testing

- 8.1 TFR shall conduct inspections during the upgrade of the trolleys.
- 8.2 The completed pantograph installation shall be inspected and tested before acceptance by Transnet.
- 8.3 A minimum distance of 200 km will be travelled during final testing phase before acceptance.

8.

## 9. Quality control

- 9.1 All processes, the manufacture and assembly of the machine and its components must be subjected to a quality assurance system.
- 9.2 The supplier will assume full responsibility for assuring that the products acquired meet the requirements of Transnet Freight Rail for function, performance and reliability including purchased products from sub-contractors.
- 9.3 The onus will be on the supplier to prove the effectiveness of their system.
- 9.4 The paint procedure must be acceptable for Transnet Freight rail.
- 9.5 Prototype/Works to be accepted by TFR.
- 9.6 ISO 9000 to 9004 must be regarded as a guideline, where applicable.
- 9.7 All new components, material, workmanship must be guaranteed for 24 months and the paint for 60 months.

## 10. Legal and Operational

- 10.1 All trolleys to be upgraded under the contract entered into between the TFR and the manufacturer shall comply with the requirements of the Machinery and Occupational Safety Act 85 of 1993.
- 10.2 The trolleys must be ready for service in all respects at the time of delivery.

- 10.3 If suppliers use their choice of equipment for the upgrade of this trolleys, all such equipment shall be approved by TFR.
- 10.4 Manufacturers shall indicate the suppliers of such equipment as the previous clause, the lead times before such equipment is taken out of the market shall also be indicated.
- 10.5 Consumable items must be available locally and must be of standardised format in order to be used on equipment of more than one supplier.
- 10.6 All trolleys are to be guaranteed for a minimum period of 24 months against faulty material (excluding material supplied by TFR) and workmanship - fair wear and tear excluded. Full details of guarantee is to be submitted.
- 10.7 The information as requested by the various clauses in this specification are to be supplied in the form of technical data, pamphlets and/or drawings. If this is not complied with, offers may be overlooked.
- 10.8 Tenderers shall indicate (clause-by-clause) a statement of compliance with the specification. This shall be indicated on the document as per annexure D.
- 10.9 Failure to comply with clause 10.8 above could preclude a tender from consideration.
- 10.10 A site diary shall be neatly documented and kept at the manufacturers premises for all inspection and meetings held regarding the upgrades of the trolley.
- 10.11 TFR reserves the right to split the award of business.
- 10.12 The contractor shall take note of the delivery requirements as in the tender document. Trolleys are to be well protected/secured during transportation from the point of shipping to the point of delivery.
- 10.13 Penalties will apply per day for delay on the delivery as per program.
- 10.14 The contractor shall be required to insure the TFR's assets while in the premises of the contractor.

**11. Reference**

This specification must be read in conjunction with the following specifications and drawings.

11.1	SANS 10044/ part 1/latest	Welding
11.2	SANS 513 /latest	Retro-Reflectors
11.3	ISO 9000 to ISO 9004	Quality
11.4	ISO 2575	Control Indicators
11.5	DIN 72552	Codes Wiring
11.6	Act 85 of 1983/latest	Machinery and Occupational Safety
11.7	Annexure A	Dimensional limitations
11.8	Annexure B	Drawings
11.9	Annexure C	List of major components
11.10	Annexure D	Schedule of compliance
11.11	Annexure E	Submission template
11.12	Annexure F	Earthing specification for RRVs
11.13	Annexure G	List of trolleys

Annexure A: Dimensional Limitations

Annexure B: Drawings

Annexure C: List of major components

Annexure D: Schedule of compliance

Annexure E: Submission document

Annexure F: Earthing specification for RRV's

Annexure G: List of trolleys

**Section 2  
QUOTATION FORM**

I/We \_\_\_\_\_ hereby offer to supply the goods/services at the prices quoted in the Price Schedule below, in accordance with the conditions related thereto.

I/We agree to be bound by those terms and conditions in:

- the Standard Terms and Conditions for the Supply of Goods or Services to Transnet [Section 3 hereof]; and
- any other standard or special conditions mentioned and/or embodied in this Request for Quotation.

I/We accept that unless Transnet should otherwise decide and so inform me/us, this Quotation [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.

I/We further agree that if, after I/we have been notified of the acceptance of my/our Quotation, I/we fail to deliver the said goods/service/s within the delivery lead-time quoted, Transnet may, without prejudice to any other legal remedy which it may have, cancel the order and recover from me/us any expenses incurred by Transnet in calling for Quotations and/or having to accept any less favourable offer.

**Price Schedule**

I/We quote as follows for the goods required, on a "delivered nominated destination" basis, excluding VAT:

Item No	Description of Goods /Services	Unit of Measure	Quantity	Unit Price (ZAR)	Total Price (ZAR)
1	.....	.....	.....		
2	.....	.....	.....		
3	.....	.....	.....		
4	.....	.....	.....		
5	.....	.....	.....		
6	.....	.....	.....		

**Delivery Lead-Time from date of purchase order :** \_\_\_\_\_ **[days/weeks]**

**Notes to Pricing:**

- All Prices must be quoted in South African Rand, exclusive of VAT
- To facilitate like-for-like comparison bidders must submit pricing strictly in accordance with this price schedule and not utilise a different format. Deviation from this pricing schedule could result in a bid being disqualified.
- 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.

### Section 3

#### STANDARD TERMS AND CONDITIONS FOR THE SUPPLY OF GOODS OR SERVICES TO TRANSNET

**A Supplier/Service Provider shall be obliged to adhere to the Standard Terms and Conditions for the Supply of Goods and Services to Transnet as expressed hereunder. Should the Respondent find any condition(s) unacceptable, it should indicate which condition(s) is/are unacceptable and offer an alternative(s). A Quotation 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.**

#### 1 SOLE AGREEMENT

Unless otherwise agreed in writing, these terms [Terms and each Term] and Transnet's purchase order(s) [Order or Orders] represent the only conditions upon which Transnet SOC Ltd [Transnet] procures goods [the Goods] or services [the Services] specified in the Order from the person to whom the Order is addressed [the Supplier/Service Provider]. Transnet does not accept any other conditions which the Supplier/Service Provider may specify, unless otherwise agreed to by Transnet in writing. In the event of any inconsistency between these Terms and any Order, these Terms shall take precedence.

#### 2 CONFORMITY WITH ORDER

Goods/Services shall conform strictly with the Order. The Supplier/Service Provider shall not vary the quantities specified and/or the specification, if any, stipulated in the Order, without the prior written consent of Transnet. The Supplier/Service Provider warrants that the Goods/Services shall be fit for their purpose and of satisfactory quality.

#### 3 DELIVERY AND TITLE

3.1 The delivery dates and addresses are those in the Order. Time shall be of the essence in respect of the Supplier's/Service Provider's obligations under the Order.

3.2 The Supplier/Service Provider will not be excused for delay in delivery or performance except due to circumstances outside its control and then only subject to the Supplier/Service Provider having notified Transnet in writing on becoming aware of such circumstances. Transnet may terminate an Order, in whole or in part, without incurring any liability to the Supplier/Service Provider if such a delay becomes, in Transnet's absolute opinion, significant.

3.3 Risk of loss or damage to Goods shall pass to Transnet on delivery, and title shall pass to Transnet when payment to the Supplier for the Goods has been effected. If on delivery, the Goods/Services do not conform to the Order, Transnet may reject the Goods/Services and the Supplier/Service Provider shall promptly rectify any defects or in Transnet's opinion, supply appropriate replacement Goods/Services at the Supplier's/Service Provider's expense within the specified delivery times, without any liability due by Transnet. Goods shall be subject to such testing and/or inspection as Transnet may consider necessary.

#### 4 PRICE AND PAYMENT

4.1 Prices specified in an Order cannot be increased. Payment for the Goods/Services shall be made by Transnet against an original undisputed invoice(s) [a Tax Invoice], supporting documentation and

month-end statement from the Supplier/Service Provider. Tax Invoices plus supporting documentation shall be posted to the address shown in the Order.

- 4.2 Payment of the Supplier's/Service Provider's valid Tax Invoice(s) will be made by Transnet in the South African currency and on the terms stated in the Order, the standard payment terms being 30 [thirty] days from date of receipt by Transnet of a month-end statement, unless otherwise agreed to in writing. Transnet shall arrange for payment of such Tax Invoices and any pre-authorized additional expenses incurred, provided that the authorised expenses are supported by acceptable documentary proof of expenditure incurred [where this is available]. Any amounts due in terms of these Terms shall be paid to the Supplier/Service Provider, taking into account any deduction or set-off and bank charges.

## 5 PROPRIETARY RIGHTS LIABILITY

If any allegations should be made or any claim asserted against Transnet that ownership of, or any act or omission by Transnet in relation to Goods/Services or any written material provided to Transnet relating to any Goods/Services or pursuant to an Order being a violation or infringement of any third party's contractual, industrial, commercial or intellectual property rights including but not limited to any patent, registered design, design right, trade mark, copyright or service mark on any application thereof, the Supplier/Service Provider hereby indemnifies Transnet against and hold it harmless from any and all losses, liabilities, costs, claims, damages and expenses [including any legal fees] arising directly or indirectly from such allegation or claim provided that this indemnity shall not apply where the allegation or claim arises solely as a result of the Supplier/Service Provider following a design or process originated and furnished by Transnet. The Supplier/Service Provider shall either

- a) procure for Transnet the right to continue using the infringing Goods; or
- b) modify or replace the Goods/Services so that they become non-infringing,

provided that in both cases the Goods/Services shall continue to meet Transnet's requirements and any specifications stipulated in the Order. Should neither option be possible, the Supplier/Service Provider may remove, with Transnet's prior written consent, such Goods/Services and will pay to Transnet a sum equivalent to the purchase price. If Transnet refuses to give such consent, the Supplier/Service Provider shall have no liability in respect of any continued use of the infringing Goods/Services after Supplier's/Service Provider's prior written request to remove the same.

## 6 PROPRIETARY INFORMATION

All information which Transnet has divulged or may divulge to the Supplier/Service Provider and any information relating to Transnet's business which may have come into the Supplier's/Service Provider's possession whilst carrying out an Order, and the existence of the Order, shall be treated by the Supplier/Service Provider as confidential information and shall not, without Transnet's prior written consent, be disclosed to any third party, or be used or copied for any purposes other than to perform the Order. This clause does not apply to information which is public knowledge or available from other sources other than by breach of this Term. Upon request by Transnet, the Supplier/Service Provider shall return all materials issued pursuant to the Order and, pending this, shall protect Transnet's rights in any such materials. Such confidential information shall at all material times be the property of Transnet.



**7 DEVELOPMENT WORK IN THE PRODUCTION OF GOODS**

If the production or provision of any Goods involves research and/or development which are wholly or partly funded by Transnet, then all intellectual property or other rights as a result thereof shall be the property of Transnet on creation.

**8 PUBLICITY**

The Supplier/Service Provider shall not name Transnet or use its trademarks, service marks [whether registered or not] or Goods in connection with any publicity without Transnet's prior written consent.

**9 AFTER SALES SERVICE**

The Supplier shall provide replacement parts necessary to ensure the uninterrupted operation of the Goods supplied for the duration of the warranty period, from delivery of any particular item of the Goods and if requested by Transnet shall make these parts available to a third party maintainer of Transnet's choice at the same price as if the parts had been supplied to Transnet. The Supplier undertakes to provide a maintenance service for Goods, should Transnet so request on terms to be agreed. If the Order so indicates, the Supplier will provide a warranty service for the Goods at a level to be agreed with Transnet.

**10 TERMINATION OF ORDER**

10.1 Transnet may cancel an Order in whole or in part at any time upon at least 7 [seven] days' written notice to the Supplier/Service Provider or when there is a change in control of the Supplier/Service Provider or the Supplier/Service Provider commits any serious breach or any repeated or continued material breach of its obligations under these Terms and/or Order or shall have been guilty of conduct tending to bring itself into disrepute, on written notice to the Supplier/Service Provider when such work on the Order shall stop.

10.2 Transnet shall pay the Supplier/Service Provider a fair and reasonable price for justified work in progress, where such price reflects only those costs not otherwise recoverable by the Supplier/Service Provider, at the time of termination, and the Supplier/Service Provider shall give Transnet full assistance to check the extent of such work in progress. Payment of such price shall be in full and final satisfaction of any claims arising out of such termination and upon such payment the Supplier/Service Provider shall deliver to Transnet all work, including any materials, completed or in progress. The sum payable to the Supplier/Service Provider under this clause will not in any event exceed the total amount that would have been payable to the Supplier/Service Provider had the Order not been terminated.

10.3 In the event of termination the Supplier/Service Provider must submit all claims within 2 [two] months of termination after which time claims will only be met in what Transnet considers exceptional circumstances.

10.4 If the Goods or Services are not provided in accordance with an Order, the Order shall be deemed terminated and the Supplier/Service Provider shall compensate Transnet for any costs incurred in obtaining substitute Goods or any damage caused due to the failure or delay in the delivery.

**11 ACCESS**

The Supplier/Service Provider shall be liable for the acts, omissions and defaults of its personnel or agents who, for the purposes of the Order, shall be treated as if they are the Supplier's/Service Provider's



employees. The Supplier/Service Provider shall ensure that any such personnel or agents, whilst on Transnet's premises, shall comply with Transnet's health and safety, security and system security rules and procedures as and where required.

## 12 WARRANTY

The Supplier/Service Provider warrants that it is competent to supply the Goods/Services in accordance with these Terms to the reasonable satisfaction of Transnet and that all Goods/Services delivered under the Order: (a) conform and comply in all relevant legislation, standards, directives and orders related to *[inter alia]* the supply, manufacture and use of the Goods/Services in force at the time of delivery, and to any specifications referred to in the Order; (b) will not cause any deterioration in the functionality of any Transnet equipment; and (c) do not infringe any third party rights of any kind. The Supplier/Service Provider hereby indemnifies Transnet against all losses, liabilities, costs, claims, damages, expenses and awards of any kinds incurred or made against Transnet in connection with any breach of this warranty.

## 13 INSOLVENCY

If the Supplier/Service Provider shall have a receiver, manager, administrator, liquidator or like person appointed over all or any part of its assets or if the Supplier/Service Provider compounds with its creditors or passes a resolution for the winding up or administration of the Supplier/Service Provider, Transnet is at liberty to terminate the Order or Orders forthwith or at its option, to seek performance by any such appointed person.

## 14 ASSIGNMENT

The Supplier/Service Provider shall not assign its obligations under an Order without Transnet's prior written consent, which consent shall not be unreasonably withheld or delayed.

## 15 NOTICES

Notices under these Terms shall be delivered by hand to the relevant addresses of the parties in the Order or may be served by facsimile or by email, in which event notice shall be deemed served on acknowledgment of receipt by the recipient.

## 16 LAW

Orders shall be governed by and interpreted in accordance with South African law and any disputes arising herein shall be subject to South African arbitration under the rules of the Arbitration Foundation of South Africa, which rules are deemed incorporated by reference in this clause. The reference to arbitration shall not prevent Transnet referring the matter to any South African courts, having jurisdiction, to which the Supplier/Service Provider hereby irrevocably submits but without prejudice to Transnet's right to take proceedings against the Supplier/Service Provider in other jurisdictions and/or obtaining interim relief on an urgent basis from a court of competent jurisdiction pending the decision in other courts or from instituting in any court of competent jurisdiction any proceedings for an interdict or any other injunctive relief. If the Supplier/Service Provider does not have a registered office in the South Africa it will at all times maintain an agent for service of process in South Africa and shall give Transnet the name and address of such agent as such may be amended, in writing, from time to time.

**17 GENERAL**

Completion or termination of an Order shall be without prejudice to any Term herein which by its nature would be deemed to continue after completion or termination, including but not limited to clauses **Error! Reference source not found.5**, **Error! Reference source not found.6**, **Error! Reference source not found.7**, **Error! Reference source not found.8** and **Error! Reference source not found.12**. Headings are included herein for convenience only. If any Term herein be held illegal or unenforceable, the validity or enforceability of the remaining Terms shall not be affected. No failure or delay by Transnet to enforce any rights under these Terms will operate as a waiver thereof by Transnet. All rights and remedies available to either party under these Terms shall be in addition to, not to the exclusion of, rights otherwise available at law.

**18 COUNTERPARTS**

These Terms and conditions may be signed in any number of counterparts, all of which taken together shall constitute one and the same instrument. Any party may enter into this agreement by signing any such counterpart.

**"PREVIEW COPY ONLY"**

By signing this RFQ document, the Respondent is deemed to acknowledge that he/she has made himself/herself thoroughly familiar with all the conditions governing this RFQ, including those contained in any printed form stated to form part hereof and Transnet SOC Ltd will recognise no claim for relief based on an allegation that the Respondent overlooked any such condition or failed to properly take it into account for the purpose of calculating quoted prices or otherwise.

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

.....  
SIGNATURE OF RESPONDENT'S AUTHORISED REPRESENTATIVE

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

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

REGISTERED NAME OF COMPANY: \_\_\_\_\_

PHYSICAL ADDRESS:  
\_\_\_\_\_  
\_\_\_\_\_

**Respondent's contact persons [Please complete]**

Name :
Designation :
Telephone :
Cell Phone :
Fax/mile :
Email :
Website :



**Transnet urges its clients, suppliers and the general public  
to report any fraud or corruption to  
TIP-OFFS ANONYMOUS : 0800 003 056**

**Section 4**  
**VENDOR APPLICATION FORM**

*Respondents are to furnish the following documentation and complete the Vendor Application Form below:*

1. **Original** cancelled cheque **OR** letter from the Respondent's bank verifying banking details **[with bank stamp]**
2. **Certified** copy of Identity Document(s) of Shareholders/Directors/Members [where applicable]
3. **Certified copies** of the relevant company registration documents from Companies and Intellectual Property Commission (CIPC)
4. **Certified copies** of the company's shareholding/director's portfolio
5. A letter on the company's letterhead confirm physical and postal addresses
6. **Original** valid SARS Tax Clearance Certificate
7. **Certified copy** of VAT Registration Certificate
8. **A valid and original** B-BBEE Verification Certificate / sworn affidavit **or certified copy** thereof meeting the requirements for B-BBEE compliance as per the B-BBEE Codes of Good Practice
9. **Certified copy** of valid Company Registration Certificate [if applicable]

**Vendor Application Form**

Company trading name						
Company registered name						
Company Registration Number or ID Number if a Sole Proprietor						
Form of entity [✓]	CC	Trust	Pty Ltd	Limited	Partnership	Sole Proprietor
VAT number [if registered]						
Company telephone number						
Company fax number						
Company email address						
Company website address						
Bank name			Branch & Branch code			
Account holder			Bank account number			
Postal address						

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

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

			Code	
Physical Address				Code
Contact person				
Designation				
Telephone				
Email				
Annual turnover range [last financial year]	< R5 m	R5 - 35 m	> R35 m	
Does your company provide	Products	Services	Both	
Area of delivery	National	Provincial	Local	
Is your company a public or private entity	Public	Private		
Does your company have a Tax Directive or IRP30 Certificate	Yes	No		
Main product or services [e.g. Stationery/Consulting]				

**Complete B-BBEE Ownership Details:**

% Black ownership	% Black women ownership	% Disabled Black ownership	% Youth ownership
Does your entity have a B-BBEE certificate		Yes	No
What is your B-BBEE status [Level 1 to 9 / Unknown]			
How many personnel does the entity employ		Permanent	Part time

*If you are an existing vendor with Transnet please complete the following:*

Transnet contact person	
Contact number	
Transnet Operating Division	

**Duly authorised to sign for and on behalf of Company / Organisation:**

Name		Designation	
Signature		Date	

**RFQ FOR THE SUPPLY / PROVISION OF  
PROVISION FOR THE ROOF MODIFICATION AND PANTOGRAPH INSTALLATION ON RAIL  
INSPECTION TROLLEYS FOR A PERIOD OF SIX MONTHS**

**ANNEXURE A : 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 ..... 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 Income Tax Act [ITA] 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.

**"PREVIEW COPY ONLY"**

**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 In terms of the Revised Codes of Good Practice issued on 11 October 2013 in terms of Government Gazette No. 36928, Bidders who qualify as QSEs 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.
- 4.6 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.
- 4.7 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.
- 4.8 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.

4.9 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.

4.10 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.

4.11 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.

"PREVIEW COPY ONLY"

**WITNESSES:**

1. ....

2. ....

SIGNATURE OF BIDDER

DATE:.....

COMPANY NAME: .....

ADDRESS:.....



**TRANSNET**  
freight rail

---

## RAIL NETWORK

### PROJECT SPECIFICATION

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# Inspection Rail Motor Trolley Upgrade: Pantograph Installation

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**Author:** Engineering Technician Molefi Moeketsane  
Small Plant & Equipment

**Approved:** Senior Engineer Hendrik Esterhuysen  
Technical and Legal Compliance

**Authorised:** Principal Engineer Leonard Msibi  
Technical and Legal Compliance

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Date: 29 November 2013

Circulation Restricted To:

Transnet Freight Rail – Rail network  
Approved Third Parties

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## 1. Scope and Tendering

### Scope

- 1.1 This specification covers the requirements for the inspection trolley upgrade within TFR.
- 1.2 The trolley shall be upgraded for better performance and to meet the heavy duty operational requirements of the railway environment.
- 1.3 Manufacturer shall take note of the requirements of this specification, have understanding of safety and operational efficiency as required.
- 1.4 For the purpose of this tender, Transnet Freight Rail shall provide items as per Annexure C of this document. This items shall be installed in the upgrading of the specific trolley. The trolley shall be upgraded to the design and functional requirements of this specification as per all drawings and documents attached to this specification. Onus lies with the contractor for the correctness of the completed work in the upgrade process.

### Tendering

- 1.5 Tenderer shall indicate compliance with this specification and submit offer based on the submission document of attached to this specification. The returnable document as attached under Annexure D and E shall be used for that purpose. All non-compliance statements shall be motivated.
- 1.6 Tenderers shall submit a project plan that satisfies the time frame as stipulated by TFR. The project plan shall indicate all the work breakdown structure with all the schedules, resources, costs, milestones etc. this plan shall be submitted with an organogram indicating all the personnel supporting the project directly and indirectly. The project shall be completed in 24 weeks. It shall take a maximum of two weeks to complete modifications on the first trolley, from second trolley onwards the contractor shall complete minimum of one trolley per week.
- 1.7 Tenderer shall submit a quotation for the complete upgrade per trolley as required in this specification. The quotation shall take into account the cost of part/components not supplied by TFR and transportation cost to and fro various TFR depots as indicated in this specification.
- 1.8 Failure to comply with clauses 1.5 to 1.7 could preclude a tenderer from consideration.



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## 2. Operating Conditions

- 2.1 The trolley shall be operated during day and night.
- 2.2 The trolley shall be operated in all weather conditions at altitudes varying from sea level to 2000m above sea level, relative humidity 10% to 90% and atmospheric conditions which varies from heavily saline to dry and dusty.
- 2.3 Ambient temperature between -5°C to 50°C.
- 2.4 Dimensional limitations as per below:
- 2.4.1 Vehicle gauge: 1,065mm gauge track shown in Annexure 2 (Sht 1 of 2). Track gauge: nominal 1065mm, with a range of: -10mm+45mm
- 2.4.2 Minimum structure gauge: refer to Annexure A of this document (as shown in Annexure 1: Sht1,2,3 and 5 of 5).

## 3. Definitions and abbreviation

- 3.1 Fat-cat trolley: Diesel engine, self propelled railway infrastructure inspection trolley used in TFR capable of carrying a crew of 15 seated people.
- 3.2 Luxrailer: Diesel engine, self propelled railway infrastructure inspection trolley used in TFR capable of carrying a crew of 9 seated people.
- 3.3 TFR: Transnet Freight Rail
- 3.4 Pantograph: A suitably modified traction current collector with pneumatic cylinder and collector pan supplied with carbon strips used for 25 kV AC / 50 kV AC traction systems.
- 3.5 ADD device: Automatic Drop Down device used to automatically drop the pantograph to avoid a hook-up
- 3.6 Insulator: A substance that resists electric current.

---

## 4. Features

- 4.1 The trolleys are fitted with a body generally to operational requirements, adapted to suit the trolley chassis for specified trolleys. (Refer to drawings as in this tender)
- 4.2 The trolleys are equipped with a diesel engine.
- 4.3 The engine has an automotive compressor used in the braking system of the trolley with an auxiliary port.
- 4.4 The system pressure is maintained at 8 bar
- 4.5 The trolley shall be fitted with a pantograph.

## 5. Capacity

- 5.1 Trolley has a crew of 9-15 people.
- 5.2 The sitting arrangement is as in drawings.
- 5.3 The trolley shall be capable of giving an indication/warning to the operator when a speed of 40km/h is exceeded while the pantograph is operated.

## 6. Upgrade works

### 6.1 Pre-installation works

- 6.1.1 The manufacturer shall remove all the attachments and cladding on the exterior side of the roof of the trolley before working on the roof frame.
- 6.1.2 The manufacturer shall prepare the roof frame structure for modification
- 6.1.3 The manufacturer shall take full responsibility and assure the correctness for the complete roof modification work on each trolley.

### 6.2 Modification and installations

#### 6.2.1 Cab roof structure/Frame

- 6.2.1.1 The existing structures are manufactured according to drawing BBF 0741 VER 1 for luxrailer and MTV170-174 for fat-cats.
- 6.2.1.2 The roof frames are manufactured from square tubing and square solid as specified on the drawings in this specification.

- 6.2.1.3 The frame shall be modified such that the roof structure is strengthened to handle the pantograph to be mounted on the roof structure.
- 6.2.1.4 The frame modifications shall be painted with one under-coat and two top-coats. The paint and procedure shall be approved by TFR.
- 6.2.1.5 All square tubing to be rust treated internally and externally with corrosion resistant material. The material shall be approved by TFR. Holes of 12mm dia. are required to inject rust treatment solution.
- 6.2.1.6 All attachments/accessories to be manufactured and/ fitted as required.
- 6.2.1.7 The pantograph sub-frame shall be manufactured as per drawing supplied.

## **6.2.2 Cladding**

- 6.2.2.1 Panels shall be manufactured from chromadek sheets with a thickness of 1 mm
- 6.2.2.2 A panel will consist of two chromadek plates with insulation in between the two chromadek layers for all panels above the trolley floor level.
- 6.2.2.3 Insulation with thickness 38 mm between panels above floor is required. The material to be polystyrene material. Panels and frame to be sealed with an approved sealing material to insulate and prevent area from moisture entry.
- 6.2.2.4 Panels are to be fitted to cover the entire roof frame structure.
- 6.2.2.5 The panels are to be riveted to the frame with Self Sealing Pop Rivets : 5mm x 15mm. Rivets to be equally spaced at maximum 75mm apart.
- 6.2.2.6 Panels must overlap each other with at least 30 mm. Contact area between overlap to be treated with an approved sealing material to ensure moisture entry prevention. Cladding which will be overlapped by following sheet, to be fitted with dia. 3mm. x 12mm. length countersunk rivets.
- 6.2.2.7 Cladding that overlaps shall be from front to rear in length direction & from top to bottom in height direction.
- 6.2.2.8 Joints that cannot be overlaid to be fitted with 3mm countersunk rivets.
- 6.2.2.9 Joints that cannot be overlaid to be capped with half-round aluminium cover strip.
- 6.2.2.10 Front and rear top corners should be manufactured from chromadeck.
- 6.2.2.11 All holes/cut-outs for front lights, rear lights, ventilators and front crank handle shall be cut after cladding prior to preparation for painting. Sizes & Positions of all referred holes/cut-outs shall be as per related drawings and sample trolley.
- 6.2.2.12 Cladding shall be completed as per this cladding requirements.

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## 6.3 Air supply system

- 6.3.1 The air system shall be installed as per TFR requirements.
- 6.3.2 A valve push-pull switch shall be installed on the side of the dashboard for pantograph operations.
- 6.3.3 2 x 50mm red lead lamp to be coupled to the pantograph system, one on the dashboard and the other on the turntable. This shall indicate when the pantograph is operational during engaging and disengaging levels.
- 6.3.4 Storage tank shall be of a 500kPa capacity.
- 6.3.5 A schematic diagram to be provided for the air system.

## 6.4 Painting the Cab

- 6.4.1 The trolley shall be painted as required in this specification.
- 6.4.2 The whole trolley must be painted using Paint type 2K or similar with an approved paint procedure.
- 6.4.3 All fitting, checker plate, stickers and windows must be removed or protected before painting.
- 6.4.4 Appropriate preparation of all surfaces including sanding and flatting.
- 6.4.5 Trolley to be inspected by TFR after preparation.
- 6.4.6 Two primer (MS primer) coats to be applied & trolley to be inspected by TFR.
- 6.4.7 Two top coats
- 6.4.8 Colour coding shall be as follows:
  - Top/Roof : Gloss white
  - Front, Side : Raven Black
  - Front, Side : Gloss White
  - Front, Side : Grey + clear coat

## 6.5 Pantograph

- 6.5.1 The trolleys shall be equipped with a pantograph fully insulated for 25kV system and equipped with an ADD.
- 6.5.2 The pantograph shall be mounted on the trolleys as per drawings provided and all drawings read in conjunction with this specification.
- 6.5.3 The manufacturer to ensure that the pantograph pan shall be the highest point of the trolley at 4m above rail.

6.5.4 The pantograph shall not be used as a current collector for this application as is the case in the traction technology, yet it shall be in contact with the live traction wire when in operation. The insulation requirement must be properly installed to meet safety requirements of this specification.

6.5.5 Pantographs with porcelain insulators shall be used on the installations. Pantographs and insulators shall be supplied by TFR.

## **7. Safety**

7.1 The trolley shall be fully insulated for the operation under the 50kV traction system.

7.2 All the systems with a potential to conduct current shall be insulated.

7.3 The pantograph shall be fully insulated.

7.4 The insulation shall be tested.

7.5 All the metal work should be effectively earthed via the wheel sets to the rail. This shall conform to the RRV earth specification as attached in Annexure F.

## **8. Testing**

8.1 TFR shall conduct inspections during the upgrade of the trolleys.

8.2 The completed pantograph installation shall be inspected and tested before acceptance by Transnet.

8.3 A minimum distance of 200 km will be travelled during final testing phase before acceptance.

## **9. Quality control**

9.1 All processes, the manufacture and assembly of the machine and its components must be subjected to a quality assurance system.

9.2 The supplier will assume full responsibility for assuring that the products acquired meet the requirements of Transnet Freight Rail for function, performance and reliability including purchased products from sub-contractors.

9.3 The onus will be on the supplier to prove the effectiveness of their system.

9.4 The paint procedure must be acceptable for Transnet Freight rail.

9.5 Prototype/Works to be accepted by TFR.

9.6 ISO 9000 to 9004 must be regarded as a guideline, where applicable.

9.7 All new components, material, workmanship must be guaranteed for 24 months and the paint for 60 months.

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## 10. Legal and Operational

- 10.1 All trolleys to be upgraded under the contract entered into between the TFR and the manufacturer shall comply with the requirements of the Machinery and Occupational Safety Act 85 of 1993.
- 10.2 The trolleys must be ready for service in all respects at the time of delivery.
- 10.3 If suppliers use their choice of equipment for the upgrade of this trolleys, all such equipment shall be approved by TFR.
- 10.4 Manufacturers shall indicate the suppliers of such equipment as the previous clause, the lead times before such equipment is taken out of the market shall also be indicated.
- 10.5 Consumable items must be available locally and must be of standardised format in order to be used on equipment of more than one supplier.
- 10.6 All trolleys are to be guaranteed for a minimum period of 24 months against faulty material (excluding material supplied by TFR and workmanship - fair wear and tear excluded. Full details of guarantee is to be submitted.
- 10.7 The information as requested by the various clauses in this specification are to be supplied in the form of technical data pamphlets and/or drawings. If this is not complied with, offers may be overlooked.
- 10.8 Tenderers shall indicate (clause-by-clause) a statement of compliance with the specification. This shall be indicated on the document as per annexure D.
- 10.9 Failure to comply with clause 10.8 above could preclude a tender from consideration.
- 10.10 A site diary shall be neatly documented and kept at the manufacturers premises for all inspection and meetings held regarding the upgrades of the trolley.
- 10.11 TFR reserves the right to split the award of business.
- 10.12 The contractor shall take note of the delivery requirements as in the tender document. Trolleys are to be well protected/secured during transportation from the point of shipping to the point of delivery
- 10.13 Penalties will apply per day for delays on the delivery as per program.
- 10.14 The contractor shall be required to insure the TFR's assets while in the premises of the contractor.
- 10.15

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## 11. Reference

This specification must be read in conjunction with the following specifications and drawings.

11.1	SANS 10044/ part 1/latest	Welding
11.2	SANS 513 /latest	Retro-Reflectors
11.3	ISO 9000 to ISO 9004	Quality
11.4	ISO 2575	Control Indicators
11.5	DIN 72552	Coded Wiring
11.6	Act 85 of 1983/latest	Machinery and Occupational Safety
11.7	Annexure A	Dimensional limitations
11.8	Annexure B	Drawings
11.9	Annexure C	List of major components
11.10	Annexure D	Schedule of compliance
11.11	Annexure E	Submission template
11.12	Annexure F	Earthing specification for RRVs
11.13	Annexure G	List of trolleys

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**Annexure A: Dimensional Limitations**

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**Annexure B: Drawings**

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**"PREVIEW COPY ONLY"**

**Annexure C: List of major components**

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**"PREVIEW COPY ONLY"**

**Annexure D: Schedule of compliance**

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**Annexure E: Submission document**

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**Annexure F: Earthing specification for RRV's**

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**Annexure C. List of trolleys**

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Release indicator	2	RFQ/purchase order			

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**Rail Trolley**

Respondents are to complete this Annexure, giving sufficient detail to permit an accurate assessment of their technical abilities.

Please note that all the essential and mandatory requirements as is in the specification

Inability to provide these requirements will preclude your company's eligibility at the technical stage of the evaluation process

**Technical Requirements**

Please note: All supportive documentation must be included in an appendix. Reference marks must refer to position in appendix.

Ref	Criteria	Requirements	Submission requirements	Yes	No	Details of proof and page number	
<b>Product specific   Rail trolleys - luxrailer and fatcat</b>							
1	General requirements	<b>Tendering</b>	Clause by clause compliance document submitted? Non compliance motivated	Please submit the schedule of compliance document			
		<b>Operating conditions</b>	The product shall be modified to meet the operational conditions as stipulated in the Transnet's specifications?	Supplier agrees			
			Manufacturer agrees to modify the product to the specific requirements of Transnet and undertakes to ensure that work shall be completed correctly?	Supplier agrees			
		<b>Transport</b>	All the transport cost of material from Transnet's workshop to the manufacturer's facilities are to the manufacturer's bill.	Supplier agrees			
The manufacturer shall remain responsible for all the transportation cost of collection and delivery of trolleys between the manufacturer facilities and the specific transnet depot.	Supplier agrees						
	<b>Performance</b>	All trolleys as per details of this tender shall be modified within a period of 3 months. A minimum of 3 trolleys per fortnight shall be modified and delivered back to the respective depots.	Supplier agrees				
2	<b>Risk and SHE plan</b>	Does the manufacturer have a risk register? Are all the risks associated with the manufacturing process identified?	Please submit a risk register for this activity	Please submit a risk register for this activity			
3	<b>Safety</b>	<b>Earthing</b>	Bidder agrees to earth the trolley as per the requirements of the specification in the tender	Supplier agrees			
4	Features and capacity	<b>Upgrade works</b>	All the upgrades as required in the specification of this tender shall be satisfied	Supplier agrees			
		<b>Warning system</b>	The trolley shall be capable of giving an indication/warning to the operator when a maximum speed of 40km/h is exceeded while the pantograph is operated.	Supplier agrees			
		<b>Pantograph</b>	Suitable pantographs (as supplied) to be installed as per the requirements of Transnet.	Supplier agrees			
5	Testing	<b>Inspections</b>	Does the manufacturer agrees for transnet to conduct a quality check on the product on weekly bases during the contract period. Each step of the manufacturing process shall be approved by TFR.	Supplier agrees			
		<b>Inspection test and trolley trip</b>	TFR shall not be held liable for any failures of the equipment under test due to poor workmanship. The manufacturer agrees to take full responsibilities of cost incurred due to test failures and transportation of the components for test. A complete trolley shall be tested on a trip during commissioning?	Supplier agrees			
6	<b>Project plan</b>	<b>WBS structure, Diagrams, Resources, Project organization</b>	Does the potential supplier have a comprehensive project plan covering the scope of works as required in the manufacturing process of the trolleys. Details must be submitted. Does the plan meet the requirements of Transnet? Are all tasks indicated? Milestones indicated as required by transnet met?  Is the comprehensive network diagram, Gantt and sequences included?  Are resource details for every task indicated?  Organogram (not a company structure), for this project	Submit a project plan as required in the specification. Suppliers to take note of the time frame for the completion of the project.			
7	<b>Quality</b>	<b>Assurance</b>	Supplier takes full responsibility and ensure that all processes, manufacture and assembly of the machine and it's components are subjected to a quality control/assurance system. Quality plan to be submitted during pre-manufacturing meeting.	Supplier agrees			

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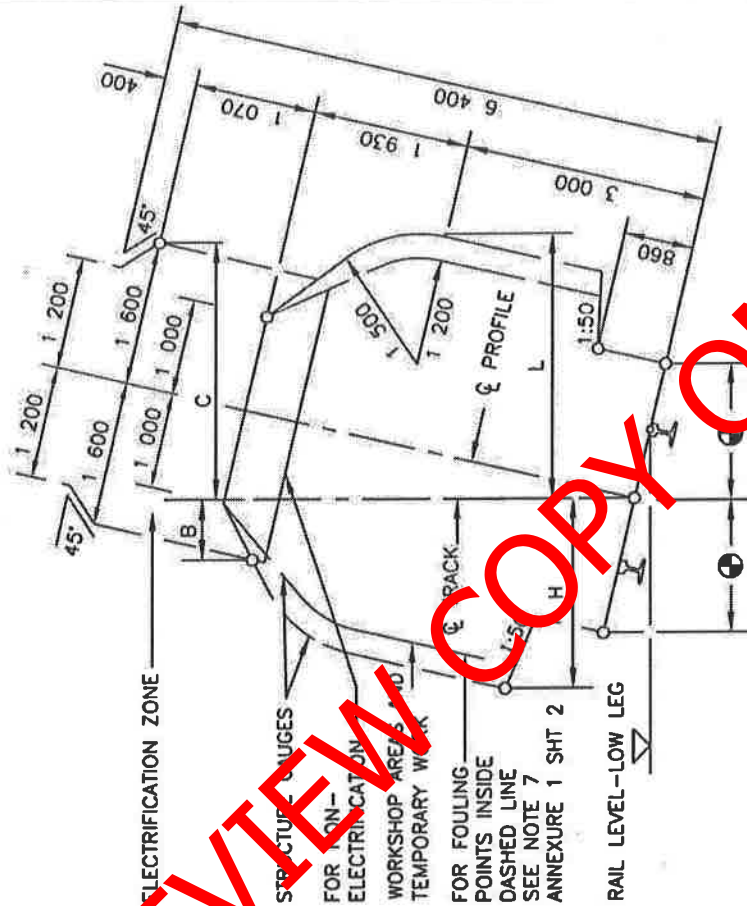
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HORIZONTAL CLEARANCES :  
1 065mm TRACK GAUGE

ANNEXURE 1  
SHEET 1 of 5



RADIUS (m)	WITH CANT		NO CANT		WITH CANT	
	H (mm)	L (mm)	H & L	B (mm)	C (mm)	B (mm)
90	2 730	3 090	2 780	1 130	1 100	1 140
100	2 700	3 030	2 750	1 140	1 050	1 140
120	2 650	2 970	2 700	1 160	1 010	1 160
140	2 620	2 920	2 660	1 175	1 950	1 175
170	2 590	2 870	2 630	1 190	1 970	1 190
200	2 570	2 820	2 600	1 205	1 950	1 205
250	2 550	2 790	2 580	1 230	1 920	1 230
300	2 540	2 760	2 560	1 250	1 900	1 250
350	2 530	2 730	2 540	1 270	1 890	1 270
400	2 520	2 710	2 530	1 290	1 875	1 290
500	2 510	2 680	2 520	1 320	1 850	1 320
600	2 500	2 660	2 510	1 340	1 830	1 340
800	2 490	2 620	2 500	1 365	1 790	1 365
1 000	2 480	2 600	2 490	1 380	1 760	1 380
1 200	2 480	2 580	2 490	1 200	1 730	1 200
1 500	2 480	2 550	2 480	1 415	1 700	1 415
2 000	2 480	2 500	2 480	1 440	1 660	1 440
3 000	2 470	2 470	2 470	1 500	1 600	1 500
>5 000	2 460	2 460	2 460	1 600	1 600	1 600

REMARKS:

- H AND B IS THE REQUIRED HORIZONTAL CLEARANCE ON THE HIGH LEG OF THE CURVE BASED ON MINIMUM CANT.
- L AND C IS THE REQUIRED HORIZONTAL CLEARANCE ON THE LOW LEG OF THE CURVE BASED ON MAXIMUM CANT.
- INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
- FOR WORKSHOP AREAS AND TEMPORARY WORK, CLEARANCES H AND L MAY BE REDUCED BY 300mm.
- SEE ANNEXURE 1 SHEET 3 FOR PLATFORM CLEARANCES.
- ALSO REFER TO REMARKS 4 TO 8 OF ANNEXURE 1 SHEET 2.
- USE SMALLER RADIUS IF RADIUS IN BETWEEN

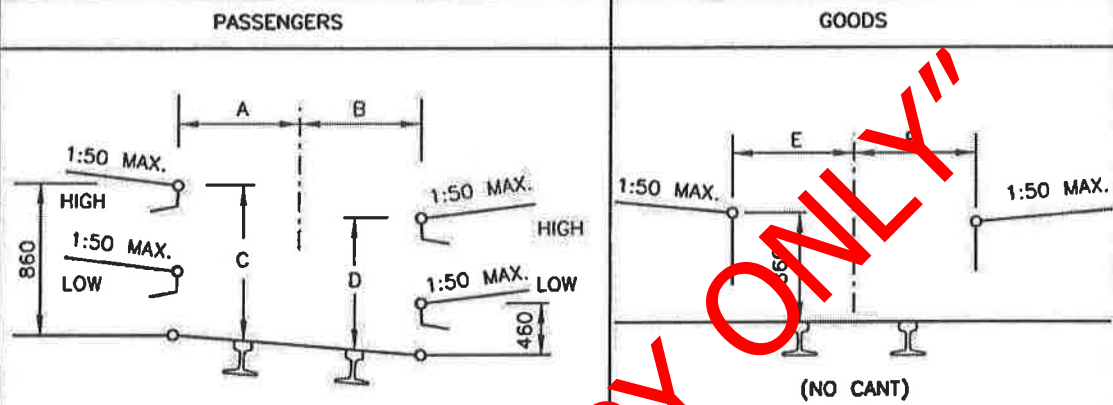




# CLEARANCES : PLATFORMS

ANNEXURE 1  
SHEET 3 of 5

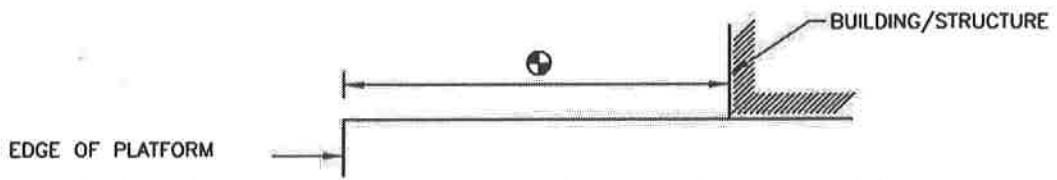
## PLATFORMS : TRACK GAUGE 1 065mm



RADIUS (m)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
90	1 690	1 820	890	810	1 840
100	1 650	1 790	890	810	1 810
120	1 610	1 740	890	810	1 760
140	1 580	1 700	890	810	1 720
170	1 550	1 660	890	810	1 690
200	1 530	1 630	890	820	1 670
250	1 520	1 600	890	820	1 640
300	1 520	1 580	890	830	1 620
350	1 520	1 560	880	830	1 600
400	1 520	1 550	880	840	1 590
500	1 520	1 540	880	850	1 580
600	1 520	1 530	870	850	1 570
800	1 520	1 520	860	860	1 560
1 200	1 520	1 520	860	860	1 550
2 000	1 520	1 520	860	860	1 540
3 000	1 520	1 520	860	860	1 530
STRAIGHT	1 520	1 520	860	860	1 520

- REMARKS:
1. NO CANT TO BE APPLIED EXCEPT WHEN THE GOODS PLATFORM IS ON A RUNNING LINE.
  2. INTERMEDIATE VALUES MAY BE INTERPOLATED BY THE ENGINEER IN CHARGE.
  3. 8m TO MAIN STATION-BUILDINGS AND 3m TO ALL OTHER STRUCTURES.
  4. TOLERANCES : SEE CLAUSE 8.0.10.
  5. ALWAYS USE THE SMALLEST RADIUS

## STRUCTURES ON PLATFORMS : 1 065mm AND 610mm TRACK GAUGE







Part list

The Cab

Descriptions	type / material spec	supplied by
--------------	----------------------	-------------

Structure		
Structural tubing: 25mm sq	mild steel	Contractor
Structural tubing: 38mm sq	mild steel	Contractor
Channels	mild steel	Contractor
Rollover protection - sq solid	mild steel	Contractor
Paint-undercoat		Contractor
Paint-final coat		Contractor
Rust treatment	Tectyl or equivalent	Contractor

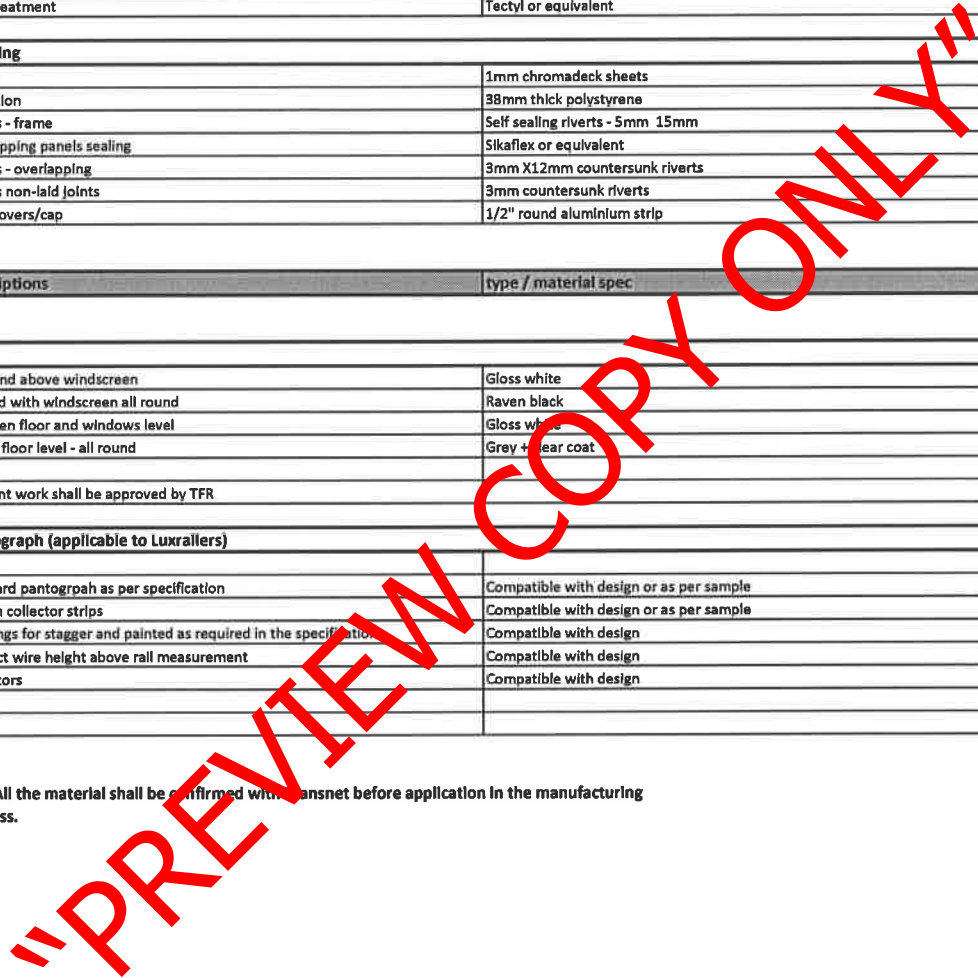
Cladding		
Panels	1mm chromadeck sheets	Contractor
Insulation	38mm thick polystyrene	Contractor
Riverts - frame	Self sealing riverts - 5mm 15mm	Contractor
Overlapping panels sealing	Sikaflex or equivalent	Contractor
Riverts - overlapping	3mm X12mm countersunk riverts	Contractor
Riverts non-laid joints	3mm countersunk riverts	Contractor
Joint covers/cap	1/2" round aluminium strip	Contractor

Descriptions	type / material spec	supplied by
--------------	----------------------	-------------

Paint		
Roof and above windscreen	Gloss white	Contractor
Aligned with windscreen all round	Raven black	Contractor
Between floor and windows level	Gloss white	Contractor
Below floor level - all round	Grey + clear coat	Contractor
All paint work shall be approved by TFR		

Pantograph (applicable to Luxrallers)		
Standard pantograph as per specification	Compatible with design or as per sample	Transnet
carbon collector strips	Compatible with design or as per sample	Transnet
Markings for stagger and painted as required in the specification	Compatible with design	Transnet
Contact wire height above rail measurement	Compatible with design	Transnet
Insulators	Compatible with design	Transnet

NB : All the material shall be confirmed with Transnet before application in the manufacturing process.





**TRANSNET**  
freight rail

a division of Transnet Limited

## ENGINEERING AND TECHNOLOGY INFRASTRUCTURE

### SPECIFICATION CONTROL PAGE

## REQUIREMENTS FOR EARTHING OF ROAD-RAIL VEHICLES

**Statement of authorisation:**

There is no SANS specification available for similar material / equipment and as far as can be ascertained no other specification / standard suitably covers Spoornet requirements. The specification has been compiled in a manner which shall favour / encourage local manufacture of material / equipment to a maximum degree.

<b>Contribution</b>	<b>Grade:</b>	<b>Name</b>
Author:	Grade: Senior Engineer Section: Infrastructure	C.F. du Toit
Supported:	Grade: Senior Engineer Technology Management	L Borchard
Authorised:	Grade: Principal Engineer Infrastructure	S. Dayanand

.....  
.....  
.....

Date: 05.12.2007  
.....

This page is for control purposes only and shall not be issued with the specification.

TRANSNET



freight rail

A division of Transnet Limited

**ENGINEERING AND TECHNOLOGY  
INFRASTRUCTURE ENGINEERING**

**SPECIFICATION**

**REQUIREMENTS FOR EARTHING OF ROAD-RAIL  
VEHICLES**

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## 1.0 SCOPE

This specification covers the Electrical requirements for earthing of equipment provided on road-rail vehicles.

## 2.0 BACKGROUND

Road-rail vehicles are used in an environment where inadvertent contact is possible between "live" overhead track equipment and the vehicle. Hydraulically powered lifting cranes and aerial working platforms may also be mounted on the RRV. OHTE maintenance vehicles are equipped with earthing masts, which fulfill the function of an "additional Earth" connection for electrical safety. It is required that a low resistance electrical path be established between such equipment and rail.

## 3.0 SERVICE CONDITIONS

The vehicle will be required to operate under the following environmental conditions, day or night, regardless of weather conditions.

Altitude:	0 - 1800m above sea level.
Ambient temperature:	Minus 5 degrees Celsius to plus 45 degrees Celsius.
Relative humidity:	10 percent to 90 percent.
Lightning conditions:	12 flashes per square km per annum.
Contact wire heights:	4,2m to 6,2m above rail level.
Confined areas:	Rail tunnels.

## 4.0 TENDERING PROCEDURE

4.1 No changes may be made to the text of this specification as issued, including its Appendices.

4.2 Tenderers shall indicate compliance with the specification on a clause-by-clause basis. This shall take the form of a separate typewritten document listing all the specification clause numbers, against which the individual statements of compliance or non-compliance must be indicated. This separate document may be used by Tenderers to elaborate on their response to a clause.

4.3 Any statement of non-compliance shall be motivated by the Tenderer.

4.4 Tenderers may offer alternatives that they deem as viable to the equipment specified in this specification. Alternative offers must be clearly marked as such. The consideration and / or acceptance of any alternative offer will be at the discretion of Transnet Freight Rail.

## 5.0 TECHNICAL REQUIREMENTS

### 5.1 General earthing requirement for RRV's

5.1.1 The body of the vehicle must be connected to rail to provide an electrical path for fault currents that may result from inadvertent contact with "live" overhead Track Equipment.

5.1.2 The steelwork (chassis) on the vehicle must be connected to rail.

- 5.1.3 The electrical path must not pass through wheel bearings since lubricated bearings in motion presents a high resistance electrical path.
- 5.1.4 Where a number of connections are required on the vehicle, a short length copper bar shall be provided, solidly fixed to the vehicle steelwork in a location where it can be easily inspected, for connecting all earth circuit cables. A good electrical connection to the vehicle body must be made at this point.
- 5.2 Connection to rail**
- 5.2.1 A slipring/carbon brush system shall be provided for bypassing the wheel bearings.
- 5.2.2 In the case of a solid axle only one connection to the axle is required by brush/slip-ring. In the case of wheels on independent bearings, all wheels must be provided with brush/slip-rings.
- 5.2.3 The slipring mechanism shall be such that the graphite brush acts radially on the rim of a copper or brass slipring disc.
- 5.2.4 The slipring system must be robust to cope with the harsh railway environment; impact acceleration due to rail joints is in the order of 6 times gravity.
- 5.3 The earthing circuit**
- 5.3.1 The earthing system shall be designed to provide protection under normal "dead" conditions for electrifications at 3kV d.c. current, 25kV alternating current and 50kV alternating current.
- 5.3.2 The earthing circuit from equipment to be earthed must be completed to rail with an uninterrupted continuous PVC insulated conductor of 70mm<sup>2</sup> copper equivalent, the preference being for flexible welding type cable. To discourage theft the conductor may be PVC insulated steel or aluminium. Steel parts of the vehicle may not be used as a conductor.
- 5.3.3 All equipment shall be earthed to the copper bar with uninterrupted continuous flexible earthing cable.
- 5.3.4 A conductor must be installed between the copper bar and all rail wheel slip-rings and the copper bar.
- 5.3.5 All earthing connections must be made between clean metal surfaces. Vibration-resistant fasteners must be used. A suitable jointing compound to prevent oxidation and ingress of moisture must be applied which covers all earthing connection fasteners.
- 5.3.6 Earthing cables must be so routed on the machine that is possible to visually verify the continuity throughout its length.
- 5.3.7 Cabling which passes through holes in metal must be provided with suitable grommets.
- 5.4 Requirements for Elevated Working Platforms**
- 5.4.1 An earthing cable must be provided which connects the basket of the EWP to the common copper bar.
- 5.4.2 The earthing cable It must be continuous over all linkages and be guided in a controlling encapsulation to prevent damage due to articulation of the EWP.
- 5.4.3 The earthing cable must be effective over the full working range of the EWP basket.
- 5.5 Requirements for Earthing Masts**
- 5.5.1 An earthing cable must be provided which connects the collector head of the earthing mast to the common copper bar over the full working range of the earthing mast, which is from rest position to 6,2 meters above rail height.



- 5.5.2 It must be continuous over all linkages and be guided in a controlling encapsulation to prevent damage.
- 5.6 Requirements for cranes.**
- 5.6.1 All articulated joints shall be bypassed with electrical jumpers of specified cross sectional area and copper equivalent as illustrated in Annexure 2 hereof.
- 5.6.2 Sections that extend shall be electrically interconnected with graphite brush boxes attached to each section.
- 5.6.3 The base of the crane shall be connected to the earthing busbar using the conductor prescribed in paragraph 5.3 hereof.
- 5.7 System Testing**
- 5.7.1 The system shall satisfy the requirements of IEC 60479-1:1994 category AC2 under high voltage. (See Annexure 1 hereof) to prove safety of the earthing system.
- 5.7.2 A short circuit test shall be carried out at a substation, with the vehicle stationary on track and the system being tested against contact with "live" overhead track equipment.
- 5.7.3 During the test the vehicle's electrical circuits must be isolated from the vehicle body, or as determined in consultation with the vehicle supplier. Transnet Freight Rail shall accept no responsibility for damage due to the underperformance of the earthing system.
- 5.7.4 All equipment delivered thereafter shall be Megger tested to prove the conductive values relative to the of the prototype installation. The conductive values shall not be higher than 2% thereof.
- 5.7.5 The slinging system will be tested by extensive driving on a branch-line standard test line.
- 6.0 ANNEXURES**
- 6.1 Annexure 1: Requirements for testing of equipment to earth contact voltage.
- 6.2 Annexure 2: Illustration of earthing requirements for road rail vehicles.

END

**ANNEXURE 1: REQUIREMENTS FOR TESTING OF EQUIPMENT TO EARTH CONTACT VOLTAGE.**

Clause	Verification
5.7.1	<p><b>TESTING OF EQUIPMENT TO EARTH CONTACT VOLTAGE:</b></p> <p>[Based on the Electrical Safety Instructions - Annexure 9.5: Voltages Occurring When Current Passes Through An Earthing System]</p> <p>1.0 <i>Contact voltage</i> is that part of the earth voltage which can be bridged by a person (fig. 2). In such a case the current flow is from hand to foot (horizontal distance about 1m) or from hand to hand.</p> <p>2.0 Contact voltages shall be measured by means of a voltmeter having an internal resistance of about 1 000 ohms.</p> <p>In any installation it is sufficient to carry out measurements at random.</p> <div data-bbox="347 884 1268 1209" style="text-align: center;"> <p>APPARATUS</p> <p>EARTHING SYSTEM</p> <p>VOLTAGE</p> <p>CONTACT VOLTAGE</p> <p>STEP VOLTAGES</p> <p>DISTANCE</p> </div> <p><b>FIG. 1 CONTACT AND STEP VOLTAGES.</b></p> <div data-bbox="359 1310 1340 1951" style="text-align: center;"> <p>VOLTAGE</p> <p>SECONDS</p> <p>DC SYSTEMS</p> <p>4.5V</p> <p>150V</p> </div>

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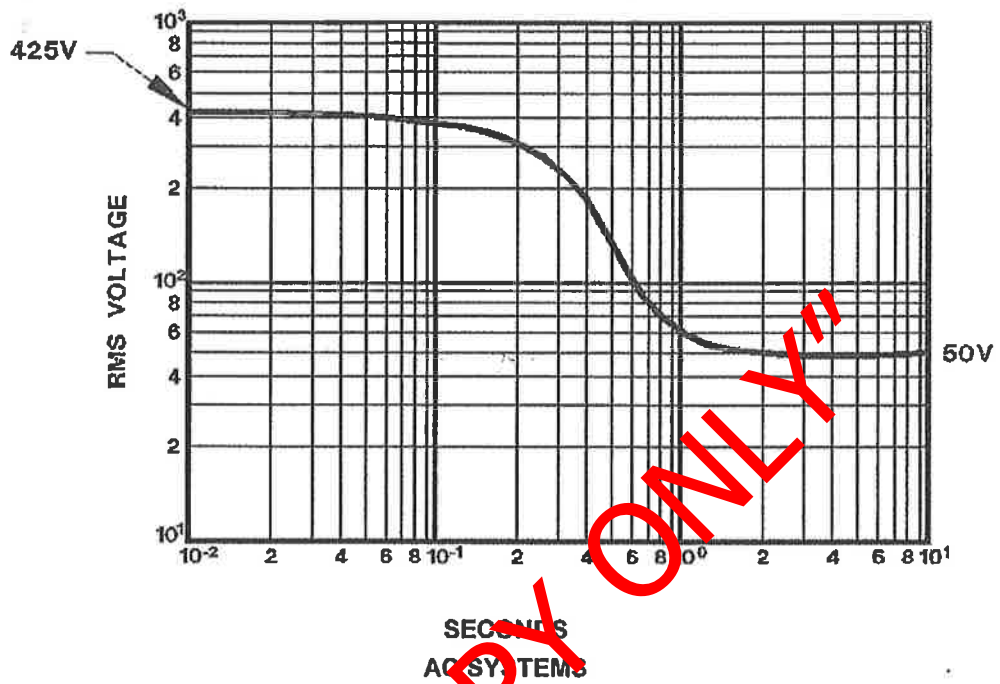


FIG. 2: RECOMMENDED LIMITS OF CONTACT AND STEP VOLTAGES.

NOTE: The above curves are based on IEC 479-1, 1985; "Effects of current passing through the human body"

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ANNEXURE 2: ILLUSTRATION OF EARTHING REQUIREMENTS FOR ROAD RAIL VEHICLES.

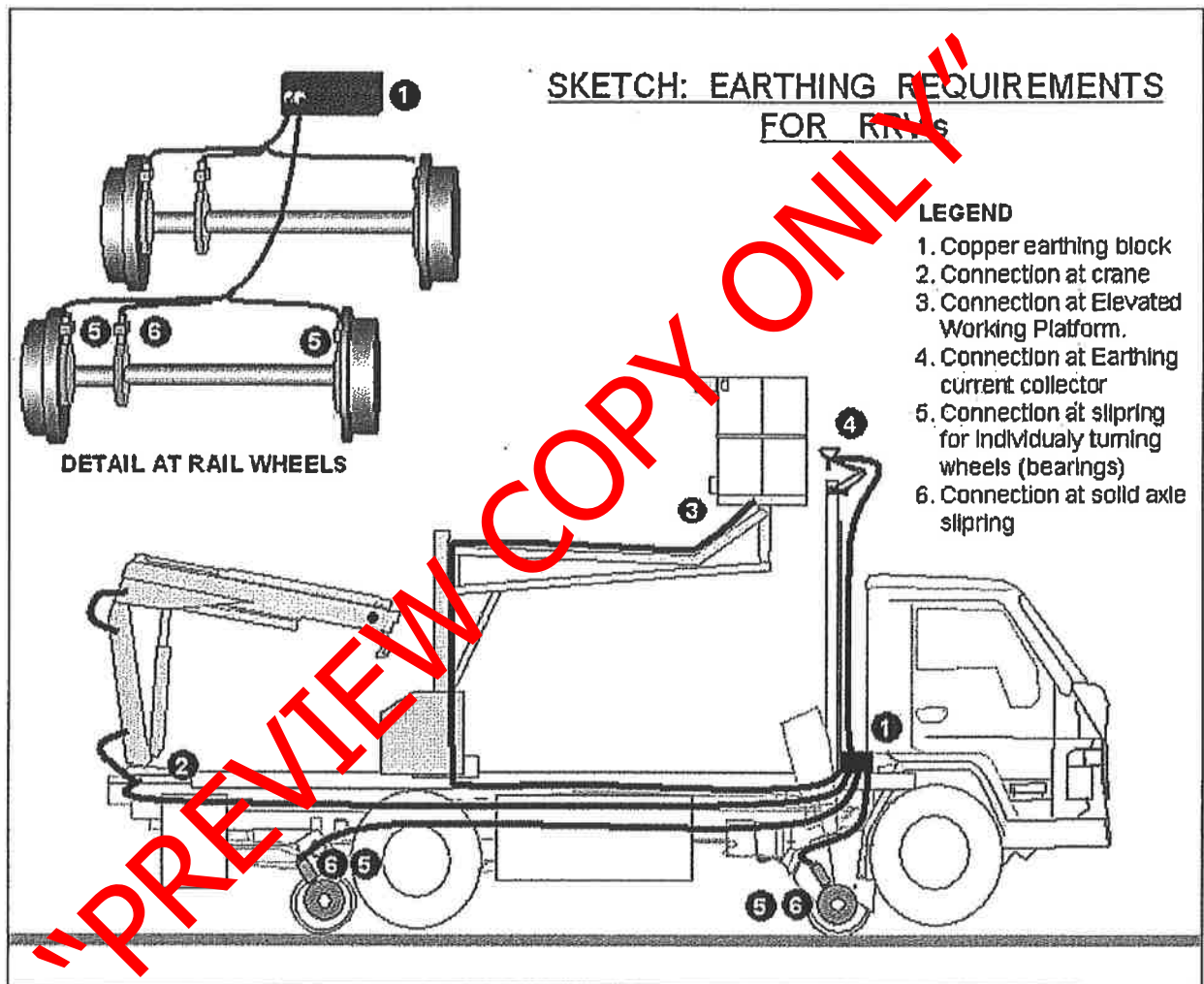
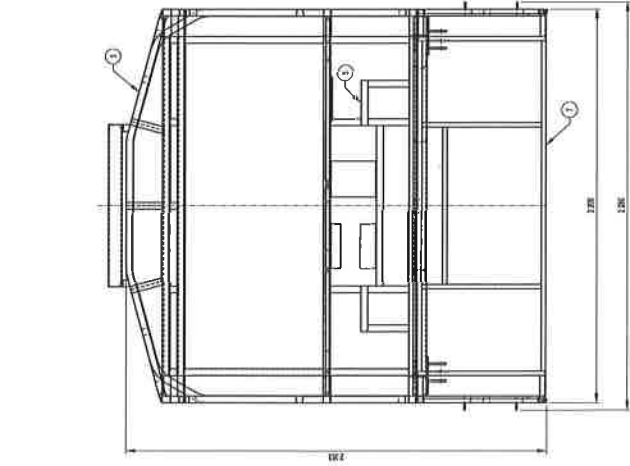
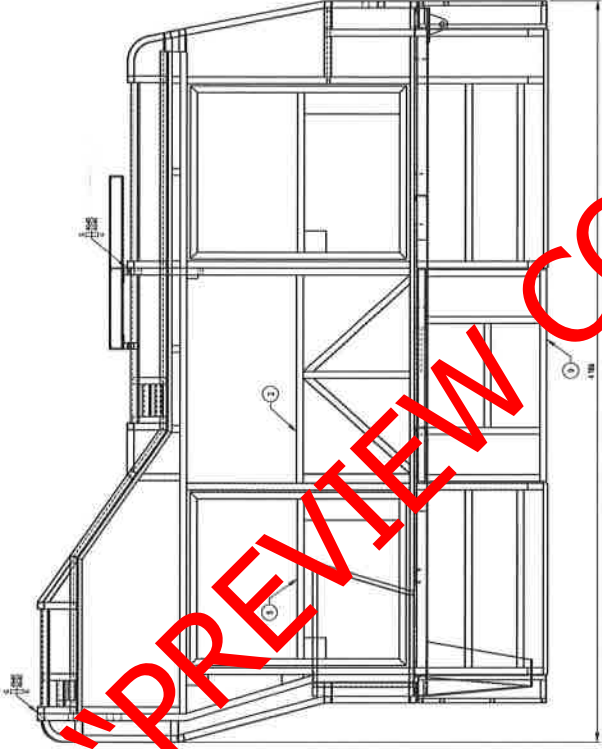


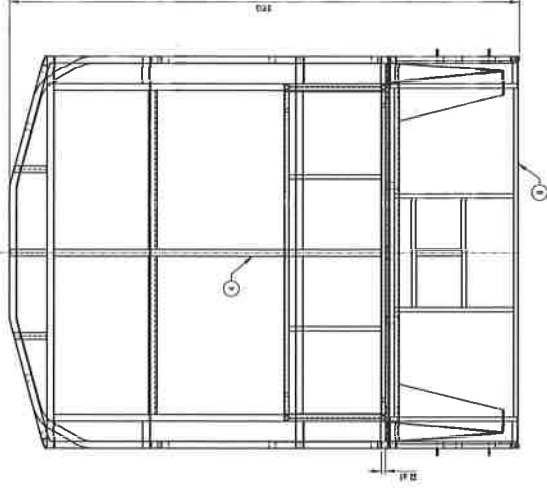
Figure 1. Earthing requirements for RRVs.



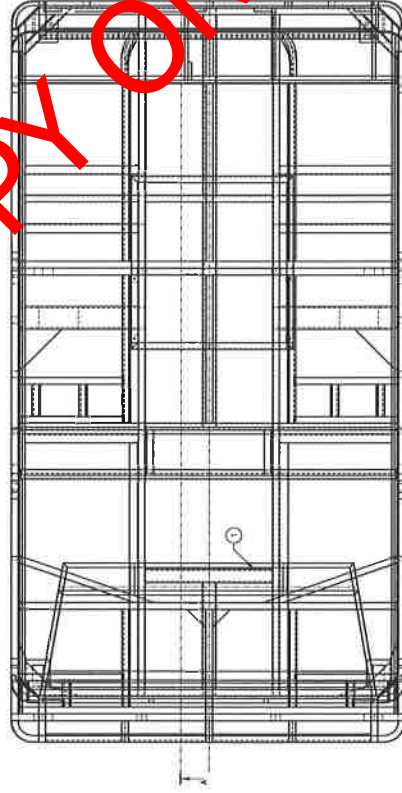
FRONT VIEW



SECTION AA



REAR VIEW



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THE DRAWING EMPRESSES ALL PREVIOUS IPIV SERIES LUXRAILER BODY DRAWINGS.

ITEM NO	STORES/ITER	QTY	DESCRIPTION	DRAWING NO
1	1	1	DOOR INSULATION DOOR FRAME	BBF0302
2	1	1	REAR INSULATION DOOR STRUCTURE	BBF0303
3	1	1	FRONT INSULATION DOOR STRUCTURE	BBF0304
4	1	1	ENTRANCE DOOR FRAME	BBF0305
5	1	1	FRONT END STRUCTURE	BBF0306
6	1	1	REAR END STRUCTURE	BBF0307
7	1	1	DOOR STRUCTURE WITH FLOOR RAILS	BBF0308
8	1	1	FLOOR STRUCTURE	BBF0309

**TRANSMET**  
 Prepared by: **BBF0741**  
 VERSION: **1**

**LUXRAILER RAIL TROLLEY BODY STRUCTURE GENERAL ASSEMBLY**

H Escorpión  
 H Escorpión  
 H Escorpión

COMPONENT PROTECTED INVENTED BY GENERAL DRAWING OFFICE  
 TOLERANCE : UN A5 AND A+ ITD W0 : 10  
 MATERIAL : C1 Iron  
 FINISHING : B v OH

**CLAUSE BY CLAUSE COMPLIANCE SCHEDULE.**

**PROVISION FOR THE ROOF MODIFICATION AND FITTING OF PANTOGRAPHS ON RAIL INSPECTION TROLLEYS FOR THREE (3) MONTHS.**

The compliance response is to contain ONLY the following statements, "Noted" or "Comply" or "Do not comply".

Noted is to be applied against statements and either of the other responses for other clauses. Where "Do not comply" are applied, remarks as to the reason for the deviation from the requirement are required.

Clause Description		Clause number	Compliance response	Explanation / Deviation / Reason
1	SCOPE & TENDERING	1.1		
		1.2		
		1.3		
		1.4		
		1.5		
		1.6		
		1.7		
		1.8		
2	OPERATING CONDITIONS	2.1		
		2.2		
		2.3		
		2.4		
3	DEFINITIONS AND ABBREVIATION	3.1		
		3.2		
		3.3		
		3.4		
		3.5		
		3.6		
4	FEATURES	4.1		
		4.2		
		4.3		
		4.4		
		4.5		
5	CAPACITY	5.1		
		5.2		
		5.3		
		Intentionally left blank		
6-6.1	PRE-INSTALLATION WORKS	6.1.1		
		6.1.2		
		6.1.3		
		Intentionally left blank		



6.2-6.2.1	CAB ROOF STRUCTURE/FRAME	6.2.1.1		
		6.2.1.2		
		6.2.1.3		
		6.2.1.4		
		6.2.1.5		
		6.2.1.6		
		6.2.1.7		
6.2.2	CLADDING	6.2.2.1		
		6.2.2.2		
		6.2.2.3		
		6.2.2.4		
		6.2.2.5		
		6.2.2.6		
		6.2.2.7		
		6.2.2.8		
		6.2.2.9		
		6.2.2.10		
		6.2.2.11		
		6.2.2.12		
		Intentionally left blank		
6.3	AIR SUPPLY SYSTEM	6.3.1		
		6.3.2		
		6.3.3		
		6.3.4		
		6.3.5		
6.4	PAINTING THE CAB	6.4.1		
		6.4.2		
		6.4.3		
		6.4.4		
		6.4.5		
		6.4.6		
		6.4.7		
		6.4.8		
6.5	PANTOGRAPH	6.5.1		
		6.5.2		
		6.5.3		
		6.5.4		
		6.5.5		
7	SAFETY	7.1		
		7.2		
		7.3		
		7.4		
		7.5		
		Intentionally left blank		

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8	TESTING	8.1		
		8.2		
		8.3		
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9	QUALITY CONTROL	9.1		
		9.2		
		9.3		
		9.4		
		9.5		
		9.6		
		9.7		
10	LEGAL AND OPERATIONAL	10.1		
		10.2		
		10.3		
		10.4		
		10.5		
		10.6		
		10.7		
		10.8		
		10.9		
		10.10		
		10.11		
		10.12		
		10.13		
		10.14		
Intentionally left blank				
11	REFERENCES	ALL		

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Trolleys list

REGION	DEPOT	Trolley type	Labour cost	Material cost	Transportation cost	Total cost
EASTERN REGION	Empangeni	Luxrailer				0
	Bloemfontein	Luxrailer				0
	Kimberley South	Luxrailer				0
WESTERN REGION	Kimberley North	Luxrailer				0
	Saldanha - Relief	Luxrailer				0
	Bellville	Luxrailer				0
	East London	Luxrailer				0
	Port Elizabeth	Luxrailer				0
CENTRAL REGION	Durban	Luxrailer				0
	Ladysmith	Luxrailer				0
	Witbank	Luxrailer				0
	Nelspruit	Luxrailer				0
	Heidelberg	Luxrailer				0
	Vereeniging	Luxrailer				0
	Isando	Luxrailer				0
	Polokwane	Luxrailer				0
	Krugerdsorp	Luxrailer				0
	Koedoespoort	Luxrailer				0
HEAD OFFICE	Technical office	Fat-cat	N/A	N/A		0
	Material supplied by Transnet					0
<b>Total costs</b>						<b>0</b>

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