



Transnet Freight Rail RME, a division of

TRANSNET SOC LTD

Registration Number 1990/000900/30

[hereinafter referred to as **Transnet**]

REQUEST FOR QUOTATION [RFQ] NO. RME DBN 053/2014

FOR THE SUPPLY OF: STREET AND FLOODLIGHTS

FOR DELIVERY TO: 130 EEL ROAD BAYHEAD DURBAN

ISSUE DATE: 24 JULY 2014

CLOSING DATE: 5 AUGUST 2014

CLOSING TIME: 12:00

"PREVIEW COPY ONLY"

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: Tender Box
CLOSING VENUE: Transnet Freight Rail (RME)
 The Chairman of the Acquisition Council
 Inyanda House 1
 21 Wellington Road Parktown, Gauteng

1 Responses to RFQ

Responses to this RFQ [**Quotations**] must not include documents of reference relating to any other quotation or proposal. Any additional conditions must be embodied in the 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 show 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 the following:

- In this RFQ Transnet will apply the 80/20 preference point system prescribed in the PPPFA.
- Proposals will be evaluated on price which will be allocated 80 points and preference which will be allocated 20 points.
- The 80/20 preference point system applies where the acquisition of the Goods will be less than R1 000 000.00. However, if the 80/20 preference point system is stipulated in this RFQ and all Bids received exceed R1 000 000.00, the RFQ will be cancelled.

In compliance with the Government Gazette No 34612, Notice No. 754 dated 23 September 2011, as from 1 October 2011 valid B-BBEE Verification Certificates must be issued by:

- (i) Verification Agencies accredited by the South African National Accreditation System [SANAS]; or
- (ii) Registered Auditors approved by the Independent Regulatory Board of Auditors [IRBA], in accordance with the approval granted by the Department of Trade and Industry.

Enterprises will be rated by such agencies based on the following:

- a) **Large Enterprises** [i.e. annual turnover greater than R35 million]:
 - Rating level based on all seven elements of the B-BBEE scorecard

- b) **Qualifying Small Enterprises – QSE** [i.e. annual turnover between R5 million and R35 million]:

- Rating based on any four of the elements of the B-BBEE scorecard

- c) **Exempted Micro Enterprises – EME** [i.e. annual turnover less than R5 million]:

In accordance with B-BBEE Codes of Good Practice [Statement 000, Section 4], any enterprise with an annual total revenue of R 5 million or less qualifies as an EME.

- Automatic rating of B-BBEE Level 4 irrespective of race or ownership
- Black ownership greater than 50% or Black Women ownership greater than 50% automatically qualify as B-BBEE Level 3

Sufficient evidence to qualify as an EME would be a certificate (which may be in the form of a letter) from an auditor or accounting officer or a certificate from a Verification Agency accredited by SANAS. The certificate must confirm the company's turnover, black ownership / black female ownership, B-BBEE status level and validity date.

Respondents are required to furnish proof of the above to Transnet. [i.e. a valid detailed scorecard as stipulated above in respect of Large Enterprises and QSEs, or a valid certificate in respect of EMEs].

Transnet will accordingly allocate a maximum of **20 [twenty] points** to the Respondent's final score based on an entity's B-BBEE scorecard rating. [Refer **Annexure A – B-BBEE Preference Points Claim Form** for further details].

N.B. Failure to submit a B-BBEE certificate, which is valid as at the Closing Date of this RFP, will result in a score of zero being allocated for B-BBEE.

[Refer clause 19 below for Returnable Documents required]

2.2 B-BBEE Improvement Plan – Not Applicable

2.3 Supplier Development Initiatives - Not Applicable

3 Communication

- a) 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.

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

Name: Anne Mongie

Email: anne.mongie@transnet.net

- c) Respondents may also, at any time after the closing date of the RFQ, communicate with the Regional Supply Chain Manager of Transnet TFR RME , Supply Chain Durban on any matter relating to its RFQ response:

Telephone 031 361 1016 Email Boitumelo.manyakalle@transnet.net

4 Tax Clearance

The Respondent's original valid Tax Clearance Certificate must accompany the Quotation. Failure to provide this document with the RFQ submission may result in disqualification.

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 short-listed 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.

In addition, Transnet reserves the right to exclude any Respondent from the bidding process who has been convicted of a serious breach of law during the preceding 5 [five] years, including but not limited to breaches of the Competition Act 89 of 1998. Respondents are required to indicate below whether or not they have been found guilty of a serious breach of law during the past 5 [five] years:

I/We _____ do hereby certify that *I/we have/have not been* found guilty during the preceding 5 [five] years of a serious breach of law, including but not limited to a breach of the Competition Act, 89 of 1998, by a court of law, tribunal or other administrative body. The type of breach that the Respondent is required to disclose excludes relatively minor offences or misdemeanours, e.g. traffic offences.

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

NATURE OF BREACH:

DATE OF BREACH: _____

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

13 Respondent's Samples – Not Applicable

14 Evaluation Criteria

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

- **Administrative responsiveness** - Completeness of response and returnable documents
- **Substantive responsiveness** – Prequalification criteria, if any, must be met and whether the Bid materially complies with the scope and/or specification given.
- 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 60%. Previous experience, qualifications, Delivery lead time, Proof of adequate workshop facilities. Technical Questionnaire to be completed.
- Weighted evaluation based on 80/20 preference point system as indicated in paragraph 2 above:
 - Pricing and price basis [firm] - whilst not the sole factor for consideration, competitive pricing and overall level of unconditional discounts¹ will be critical
 - B-BBEE status of company

¹ 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.

Preference points will 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 (80/20 system)
1	20
2	18
3	16
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

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.

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

Failure to provide all these Returnable Documents at the Closing Date and time of this RFQ 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 Returnable Documents by so indicating [Yes or No] in the table below:

Returnable Documents	Submitted [Yes or No]
SECTION 1 : Notice to Bidders	
<ul style="list-style-type: none"> - Valid B-BBEE Verification Certificate [RSA Large Enterprises and QSEs] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the tender will result in an automatic score of zero being allocated for B-BBEE scorecard 	
<ul style="list-style-type: none"> - Valid B-BBEE certificate from auditor, accounting officer or SANAS accredited Verification Agency [RSA EMEs] Note: failure to provide a valid B-BBEE Verification Certificate at the closing date and time of the tender will result in an automatic score of zero being allocated for B-BBEE scorecard 	
<ul style="list-style-type: none"> - In the case of Joint Ventures, a copy of the Joint Venture Agreement or written confirmation of the intention to enter into a Joint Venture Agreement 	
SECTION 2 : Quotation Form	
SECTION 3: Vendor Application Form	
<ul style="list-style-type: none"> • Original valid Tax Clearance Certificate [Consortia / Joint Ventures must submit a separate Tax Clearance Certificate for each party] 	
ANNEXURE A – B-BBEE Preference Points Claim Form	
ANNEXURE B : Technical Submission/Questionnaire	

Respondent's Signature

Date & Company Stamp

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 [available on request]; 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	Streetlight - 400W HPS-T Supra high performance one piece reflector 3 compartment	Each	12		
2	Floodlight - 400W HPS-T Max Planer projector/Heli, zero upward Light, total cut-off medium beam.	Each	136		

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

Notes to Pricing:

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

Respondent's Signature

Date & Company Stamp

STREET LIGHTS

RFQ FOR SUPPLY AND DELIVERY OF STREETLIGHTS

FOR A PERIOD OF ONCE OFF

ANNEXURE C: TECHNICAL/FUNCTIONALITY CRITERIA

Quality criteria	specification	Yes (submit specification)	No
As per the specification	THE STREETLIGHT FITTING SHALL CONSIST OF THREE COMPARTMENTS		
Quality criteria	Specification	Yes (submit proof)	No
As per the specification	THE DE-FUSER SHALL BE SECURED BY AT LEAST 5 STAINLESS STEEL CLAMPS		

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FLOODLIGHTS

RFQ FOR SUPPLY AND DELIVERY OF FLOODLIGHTS

FOR A PERIOD OF ONCE OFF

ANNEXURE C: TECHNICAL/FUNCTIONALITY CRITERIA

Quality criteria	specification	Yes (submit specification)	No
As per the specification	THE FLOODLIGHTS SHALL NOT BE TILTED ABOVE THE HORIZONTAL		
Quality criteria	Specification	Yes (submit proof)	No
As per the specification	THE REPLACEMENT OF THE LAMP SHALL BE DONE WITHOUT THE REMOVAL OF THE FRONT GLASS		

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Section 3
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** copy of Certificate of Incorporation, CM29 / CM9 [name change]
4. **Certified** copy of Share Certificates [CK1/CK2 if CC]
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. **Certified copy** of valid Company Registration Certificate [if applicable]
9. A signed letter from your auditor or accountant confirming most recent annual turnover figures

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						Code	
Physical Address							

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

Complete B-BBEE Ownership Details:

% Black ownership	<input type="text"/>	% Black women ownership	<input type="text"/>	% Disabled Black ownership	<input type="text"/>
Does your company have a B-BBEE certificate	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
What is your B-BBEE status [Level 1 to 9 / Unknown]					
<input type="text"/>					
How many personnel does the firm employ	Permanent	<input type="text"/>	Part time	<input type="text"/>	

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

Transnet contact person	<input type="text"/>
Contact number	<input type="text"/>
Transnet Operating Division	<input type="text"/>

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

Name	<input type="text"/>	Designation	<input type="text"/>
Signature	<input type="text"/>	Date	<input type="text"/>

ITEM 1:

THE MANUFACTURE, SUPPLY AND DELIVERY OF FLOODLIGHT LUMINAIRES, FOR TRANSNET RAILWAY YARD FLOODLIGHTING APPLICATIONS, WHERE PRECISE TOTAL CUT-OFF CHARACTERISTICS ARE REQUIRED.

1) General

- a) The luminaire shall consist of a one-piece high pressure die cast aluminium housing for the lamp and control gear. The control gear housing must be separate but form an integral part of the luminaire. It shall be designed to operate tubular 400W high pressure sodium lamps.
- b) The luminaire shall bear the "SABS certification mark for approved performance shown by an 'A' enclosed by a diamond" and shall be tested and approved to the SANS 473 standard. A SANS test report for this mark shall be submitted with your tender.
- c) The luminaire shall bear the SANS 60598-2-5 safety mark. A SANS test report for this mark shall be submitted with your tender.

2) Construction of Luminaires

- a) The luminaire shall have a degree of protection that complies with SANS 60598-1:
 - i. Lamp Compartment: IP65
 - ii. Gear Compartment: IP65The IP ratings shall be certified by a SABS test report. This report shall be submitted with your tender.
- b) The luminaire housing shall be robustly constructed, weatherproof, hail proof, corrosion proof and vandal resistant.
- c) The floodlight luminaire shall be manufactured from grade LM 6 die cast aluminium alloy. A metallurgical report verifying the use of LM6 aluminium alloy, for the tendered product, shall be submitted with your tender. Transnet reserves the right to submit a sample for metallurgical testing where necessary.
- d) The front glass covering the lamp compartment shall be heat and impact resistant, held to the lamp housing by four stainless steel clamps and sealed by an extruded heat resistant silicon gasket and shall not be hinged.
- e) The asymmetric distribution of the floodlight shall be designed to operate with the front glass truly parallel to the ground (i.e. flat), thus avoiding any upward lighting pollution.
- f) All external screws, bolts and metal parts shall be stainless steel (grade 304 or better). All internal screws shall be stainless steel or anti-corrosion treated material. All screws or bolts, if used, shall be held captive once loosened.
- g) Stainless steel helicoil inserts shall be provided, for the lamp holder housing and the control gear compartment, to prevent the galvanic corrosion of stainless steel screws to the aluminium housing.
- h) The gross mass of the complete floodlight luminaire, including control gear, shall 18 Kg (maximum).
- i) The windage area of the luminaire shall be a maximum of 0.085m².

3) Reflectors

- a) Reflectors shall be manufactured from 99.98% super pure deep anodized aluminium and shall not be subject to accidental misalignment and cannot be accessed by hand.
- b) Reflectors shall be designed for photometric performance characteristics as follows:
 - i. The precision designed reflector technology shall project the luminous flux at a specific maximum intensity (peak angle) of 67° (±0.5°) from the downward vertical.
 - ii. The minimum Light Output Ratio (LOR) shall be 70%
 - iii. The Downward Flux Fraction Ratio (DFF) shall be 100%, meaning the Upward Flux Fraction Ratio (UFF) shall be 0%.
 - iv. The peak intensity shall be a minimum of 945 cd/klm.
 - v. The intensity from the downward vertical, at 90° shall be 0 cd/klm and at 80° shall be a maximum of 15 cd/klm.
 - vi. The beam distribution shall be Medium beam. Narrow beam distribution is not acceptable.

All photometric performance details, as required above, shall be confirmed by submitting an official SABS Photometric test report.

- c) An electronic design, as per a specific design area to be submitted by the client, may be requested during the adjudication process. The bidder shall also submit an encrypted data file for verification of design results, should said design be requested.

4) Lamp Access

- a) Lamp replacement shall be facilitated from the side only, on the exterior of the floodlight housing, through the use of a removable high pressure die cast (LM6) aluminium alloy lamp holder housing.
- b) The lamp holder housing shall be sealed with a one-piece silicon gasket and held to the floodlight with two stainless steel screws.
- c) Luminaires where lamp replacement requires the front glass to be removed or hinged open shall not be accepted. No hinging mechanism shall be incorporated.

5) Control Gear

- a) The control gear compartment shall be separated for thermal reasons from the lamp compartment.
- b) Access to the gear compartment shall be gained by removing the separate die cast (LM6) aluminium cover which shall be held by four captive stainless steel screws.
- c) The control gear shall be mounted on a removable gear tray and suitable for operation with the specified rating of the lamp on a 230V +3%/-10% 50Hz single phase system.
- d) All control gear components shall be removable and all shall bear the relevant SABS or IEC mark. The luminaire shall be power factor corrected to a minimum of 0,9.
- e) The ignitor shall be of the superimposed solid state electronic trigger pulse type. The ignitor shall be connected in series with the ballast and installed directly between the ballast and lampholder. Systems which operate with the ignitor in parallel with the lamp or with special tapped ballasts will not be acceptable.
- f) Lampholders shall be rated to withstand 240°C/5KV, be rated at the appropriate lamp ignition voltage and shall comply with VC 8011.
- g) The control gear compartment shall be so designed that there is sufficient space to permit repairs, replacement of components and reassembly without difficulty and without the removal of the luminaire from its mounting.

6) Mounting

The floodlight shall have the following mounting options:

- a) A screw mounting bracket, manufactured from 5 x 50mm hot dipped galvanised steel. Holes shall be provided for mounting purposes.
- b) Bottom entry pole cap suitable for a 76mm diameter spigot, manufactured from grade LM 6 die cast aluminium alloy.
- c) Wall mounting bracket with wall mounting plate.

7) Guarantee

All luminaires offered shall have a minimum guarantee period of **TEN years**. If luminaires are found to have failed within this period as a result of poor manufacturing processes and/or poor materials it shall be replaced free of charge by the manufacturer.

This guarantee excludes the control gear, but includes the luminaire housing, glass, lamp holder, brackets etc. Bidders shall provide a separate guarantee for the control gear.

8) Samples

When samples are requested for evaluation, properly labelled samples (Tender reference, item number and the bidding company name) shall be delivered to the address as shall be stipulated in the request. Delivery of samples shall be within three (3) days from the date of request.

Requirements for Item 1: Floodlight Luminaire, 400 Watt, HPS/T

TECHNICAL SCHEDULE A1

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

Ref No	Technical Details	Transnet's Requirement	Bidder's Offer
1	Name of manufacturer		
2	Place of manufacture/assembly		
3	Manufacturer's identification reference		
4	Place (country) of manufacture (not assembly) of die-cast aluminium housing, control gearbox and lid		
5	Specification to which luminaire complies:		
5.1		SANS 60598-2-1 Safety Mark	
5.2		SANS 475 Performance Mark	
6	Type of lamp for luminaire design	HPS/T 48,000 lm	
7	Rated wattage of lamp	400 W	
<u>Degree of protection to SANS 60529:</u>			
8	a) Lamp compartment	minimum IP 65	
	b) Control gear compartment	minimum IP 65	
9	<u>Materials</u>		
9.1	Material of body	High Pressure Die Cast Aluminium Grade LM 6	
9.2	Material of front protector	Glass	
9.3	Material of gasket	Extruded, silicon	
9.4	Material of reflector	High grade 99,98% super pure deep anodised aluminium	
9.5	Material of lamp holder housing	Die cast aluminium Grade LM 6	
9.6	Material of small metal components (external)	stainless steel (minimum grade 304)	
10	Prevention of ferrous components	hot-dip galvanised to SANS 121	
11	Prevention of galvanic corrosion, for the lamp holder housing and the control gear compartment	Stainless steel helicoils	
12	<u>Control Gear</u>		
12.1	Control gear compartment	Thermally Separated from lamp compartment	
12.2	Specification with which ballast complies		
12.3	Make of Ballast		
12.4	Circuit connection (series, parallel, special tapped ballast)	Series	
12.5	Voltage service range of ballast		
12.7	Ballast factor		
12.8	Specification with which capacitor complies		
12.9	Temperature rating of capacitor		
12.10	Make of ignitor		

12.11	Type of ignitor		
12.12	Power factor of luminaire	0,9 lagging (min)	
12.13	Voltage rating of wiring		
13	Lampholder		
13.1	Specification to which lampholder complies	SANS VC 8011	
13.2	Type of lampholder	GES	
13.3	Rated voltage of lampholder	5KV	
13.4	Material of lampholder	Porcelain	
13.5	Rated withstand temperature	240 °C	
14	Gross mass of complete luminaire (Excluding lamp)	18 Kg (maximum)	
15	Optical Data		
15.1	Angle of maximum intensity from downward vertical	67.5° (max)	degree
15.2	The maximum value of intensity, from the downward vertical, emitted at:		
	a) 90° from downward vertical	0 cd/klm	cd/klm
	b) 80° from downward vertical	15 cd/klm	cd/klm
15.3	Maximum (peak) intensity	948 cd/klm (Min.)	cd/klm
15.4	Light output in upper hemisphere	0%	%
15.5	Light output in lower hemisphere	100%	%
15.6	Light output ratio (efficiency)	70% (Minimum)	%
15.7	Available beam distributions	Medium	
16	Is the luminaire marked in accordance with Clauses 1b), 1c) and 2a) of the technical specification?	Yes	
17	Have test reports been submitted with your bid in accordance with Clauses 1b), 1c), 2a), 2c) and 3b) of the technical specification?	Yes	
18	Guarantee period on Luminaires per Clause 7 of the technical specification	10 Years	
19	Guarantee period on control gear	18 Months	

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ITEM 2:

THE MANUFACTURE, SUPPLY AND DELIVERY OF SUPER EFFICIENT STREETLIGHT LUMINAIRES, DESIGNED FOR LIGHTING OF TRANSNET RAILYARDS, WITH EFFICIENT OPTICAL CONTROL RESULTING IN WIDER SPACINGS BETWEEN POLES

1) General

- a) The luminaire shall have 3 compartments, consisting of separate lamp, control gear and spigot compartments. The control gear housing shall be separated from the lamp housing for thermal reasons. The luminaire shall be designed to operate 400W high pressure sodium lamps.
- b) The luminaire shall bear the "SABS certification mark for approved performance shown by an 'A' enclosed by a diamond" and shall be tested and approved to the SANS 475 standard. A SANS test report for this mark shall be submitted with your tender.
- c) The luminaire shall bear the SANS 60598-2-3 safety mark. A SANS test report for this mark shall be submitted with your tender.

2) Construction of Luminaires

- a) The luminaire shall have a degree of protection that complies with SANS 60598-1:
 - i. Lamp compartment: IP66
 - ii. Gear compartment: IP66

The IP ratings shall be certified by a SABS test report. This report must be submitted with your tender.

3) Luminaire spigot entries shall comply with SANS 1088 - Table 1.

The luminaire must be suitable for:

Side entry - $\varnothing 42\text{mm} \times 125\text{mm}$ spigot and
Bottom entry - $\varnothing 76\text{mm} \times 75\text{mm}$ spigot

4) The housing details of the luminaire:

- a) The housing, especially the lamp compartment, shall be robustly constructed, weatherproof, hail proof, corrosion proof, ultra-violet light resistant and vandal resistant.
- b) The lamp housing shall be manufactured from filled ultraviolet stabilized engineering polymer and shall be grey in colour.
- c) An exterior lip shall be provided on the lamp housing to avoid direct rain water contact with the gasket, thus ensuring that no moisture shall be sucked into the diffuser when the luminaire is switched off and cools down.
- d) Luminaires shall be suitable for operation at an ambient temperature, T_a , of 35°C . A separate ambient temperature (T_a rating) test report, in accordance with SANS 475, shall be submitted with your tender.
- e) The gross mass of the complete luminaire (excluding lamp) shall be a maximum of 14 Kg.
- f) The windage area of the luminaire shall be a maximum of 0.22m^2 .

5) The non-discolouring high-impact acrylic diffuser bowl shall have no external prisms and shall be held to the housing by five stainless steel clips. It shall remain attached to the housing when hinged open.

The luminaire housing shall be suitable for incorporating a flat glass lens where required.

6) The gasket sealing the lamp compartment and gear compartment shall be made of silicon sponge rubber fitting into a tongue-and-groove arrangement.

7) Access to the lamp and control gear compartments shall be from the bottom of the luminaire.

8) Reflector system

- a) The one-piece reflector system shall be manufactured from chemically brightened 99,98% super pure deep anodized aluminium and shall not be subject to accidental misalignment, ensuring the correct alignment of the lamp for optimum high performance.
- b) Reflectors shall be designed for photometric performance characteristics as follows:
 - i. The precision designed reflector technology shall project the luminous flux at a specific peak angle of between $70^\circ - 72.5^\circ$.
 - ii. The design of the reflector shall ensure that although the peak angle may appear high, the Glare Rating (Ti) is always well within the maximum limits as defined in SANS 10098-1:2007 "The lighting of public thoroughfares" document.
 - iii. The minimum Light Output Ratio (LOR) shall be 78%

- iv. The Downward Flux Fraction Ratio (DFF) shall be 100%, meaning the Upward Flux Fraction Ratio (UFF) shall be 0%.
 - v. The peak intensity shall be a minimum of 395 cd/klm.
 - vi. The intensity from the downward vertical, at 90° shall be 0 cd/klm and at 80° shall be a maximum of 175 cd/klm.
 - vii. The reflector shall be designed for use with Tubular (T) lamps only. The use of coated Elliptical (E) lamps is not acceptable.
- c) All photometric performance details, as required above, shall be confirmed by submitting an official SABS Photometric test report.

An electronic design, as per a specific design area to be submitted by the client, may be requested during the adjudication process. The bidder shall also submit an encrypted data file for verification of design results, should said design be requested.

9) Control Gear

- a) The lamp holder shall comply with VC 8011, shall be rated to withstand 240°C/5kV and shall prevent possible loosening of the lamp caused by vibrations.
- b) The control gear compartment shall be manufactured from high pressure die cast (LM6) aluminium. A metallurgical report verifying the use of LM6 aluminium alloy for the tendered product, shall be submitted with your tender. Transnet reserves the right to submit a sample for metallurgical testing where necessary.
- c) The control gear compartment shall be covered by a hinged, non-corrosive lid which fixes onto a silicon sponge gasket in the body incorporating a tongue-and-groove arrangement.
- d) The control gear compartment must be suitable for mounting an optional integrally mounted 10A/2.5kA MCB where required. The design of the hinged lid shall be such that the exposed lever of the circuit breaker is accessible from the outside of the luminaire, without compromising the IP rating of the gear compartment.
- e) The control gear shall be mounted on a removable gear tray and shall be suitable for operation with the 400w lamp on a 230V +3%/-10% 50Hz single phase system.
- f) All control gear components shall be removable and all shall bear the relevant SABS or IEC mark. The luminaire shall be power factor corrected to a minimum of 0,9.
- e) The ignitor shall be of the superimposed solid state electronic trigger pulse type. The ignitor shall be connected in series with the ballast and installed directly between the ballast and lampholder. Systems which operate with the ignitor in parallel with the lamp or with special tapped ballasts will not be acceptable.
- g) The separate spigot compartment shall house the screw terminal block and wire clamp. No access to the control gear compartment shall be required for installation, thus possible damage to the control gear shall be avoided.
- h) An optional downward facing miniature daylight switch must be fitted to this compartment where required.

- 10) All the test reports detailed shall be issued by SANS. For the Ta rating test an IEC accredited test authority is acceptable.

11) Guarantee

All luminaires offered shall have a minimum guarantee period of **TEN years**. If luminaires are found to have failed within this period as a result of poor manufacturing processes and/or poor materials it shall be replaced free of charge by the manufacturer.

This guarantee excludes the control gear, but includes the luminaire housing, diffuser, lamp holder, brackets etc. Bidders shall provide a separate guarantee for the control gear.

11. Samples

When samples are requested for evaluation, properly labelled samples (Tender reference, item number and the bidding company name) shall be delivered to the address as shall be stipulated in the request. Delivery of samples shall be within three (3) days from the date of request.

Requirements for Item 2: Streetlight Luminaire, 400 Watt, HPS/T

TECHNICAL SCHEDULE A2

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

Ref No	Technical Details	Transnet's Requirement	Bidder's Offer
1	Name of manufacturer		
2	Place of manufacture/assembly		
3	Manufacturer's identification reference		
4	Place (country) of manufacture (not assembly) of die-cast aluminium control gear housing and lamp housing		
5	Specification to which luminaire complies:		
5.1		SANS 60598-2-1 Safety Mark	
5.2		SANS 475 Performance Mark	
6	Type of lamp for luminaire design	HPS/T 48,000 lm	
7	Rated wattage of lamp	400 W	
8	<u>Degree of protection to SANS 60529:</u>		
	a) Lamp compartment	minimum IP 66	
	b) Control gear compartment	minimum IP 66	
9	Type and nominal size of spigot entry	Side - 42 mm Bottom - 76 mm	mm mm
10	Entry into lamp and control gear compartments	Bottom (underside)	
11	<u>Materials</u>		
11.1	Material of body		
11.2	Material of protector (hawl)	High impact acrylic	
11.3	Material of gasket	Extruded, silicon	
11.4	Material of reflector	High grade 99,98% super pure deep anodised aluminium	
11.6	Material of small metal components (external)	stainless steel (min. grade 304)	
12	Protection of ferrous components	hot-dip galvanised to SANS 121	
13	<u>Control Gear</u>		
13.1	Control gear compartment	Thermally separated from lamp compartment	
13.2	Specification with which ballast complies		
13.3	Make of Ballast		
13.4	Circuit connection (series, parallel, special tapped ballast)	Series	
13.5	Voltage service range of ballast		
13.7	Ballast factor		
13.8	Specification with which capacitor complies		
13.9	Temperature rating of capacitor		
13.10	Make of ignitor		
13.11	Type of ignitor		
13.12	Power factor of luminaire	0,9 lagging (min)	

13.13	Voltage rating of wiring		
14	Lampholder		
14.1	Specification to which lampholder complies	SANS VC 8011	
14.2	Type of lampholder	GES	
14.3	Rated voltage of lampholder	5 KV	
14.4	Material of lampholder	Porcelain	
14.5	Rated withstand temperature	240 °C	
15	Gross mass of complete luminaire (Excluding lamp)	14 Kg (maximum)	
16	Optical Data		
16.1	Angle of maximum intensity from downward vertical	70 - 72.5°	degree
16.2	In vertical plane parallel to street axis, maximum value of intensity emitted at:		
	a) 90° from downward vertical	0 cd/klm	cd/klm
	b) 80° from downward vertical	15 cd/klm	cd/klm
16.3	Maximum (peak) intensity	360 cd/klm (Min.)	cd/klm
16.4	Light output in lower hemisphere	100%	%
16.5	Light output in upper hemisphere	0%	%
16.6	Light output ratio (efficiency)	78% (Minimum)	%
17	Is the luminaire marked in accordance with Clauses 1b), 1c) and 2a) of the technical specification?	Yes	
18	Have test reports been submitted with your bid in accordance with Clauses 1b), 1c), 2a), 4d), 8b) and 9b) of the technical specification?	Yes	
19	Guarantee period on Luminaire as per Cause 7 of the technical specification	10 Years	
20	Guarantee period on control gear	18 Months	

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