



**SUPPLY, REPAIRS AND REPLACEMENT
OF FAULTY EQUIPMENT
TO REINSTATE THE EXISTING CCTV
CAMERA SYSTEM TO FULL
FUNCTIONALITY, INCLUDING TESTING
AND COMMISSIONING
AT DURBAN MAIN CENTRE, ROTATING
MACHINES DEPOT (RM), ELECTRICAL
LOCOMOTIVES DEPOT (ELD), COIL SHOP
AND WENTWORTH DEPOT.**

**311 SOLOMON MAHLANGU DRIVE,
ROSSBURGH.**

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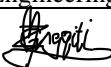
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Signature of Bidder/s: _____

Date: _____

Document Authorities

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Signature	 26/02/2024

Signature of Bidder/s: _____

Date: _____

1. INTRODUCTION / SCOPE of Work

This specification is for the:

#	TASK	REQUIRED
1	Design	
2	Manufacture	
3	Configuration	✓
4	Integrate	✓
5	Supply	✓
6	Installation	✓
7	Documentation	✓
8	Testing	✓
9	Training	✓
10	Commissioning	✓

of the specified:

#	ITEM	REQUIRED
1	Supply, repairs and replacement of faulty equipment to reinstate the existing CCTV camera system to full functionality, including testing and commissioning at Durban Main Centre, Rotating Machines Depot (RM), Electrical Locomotives Depot (ELD), Coil Shop and Wentworth Depot.	✓

2. SITE INSPECTION

- 2.1 All prospective contractors shall be required to undertake a compulsory site inspection to fully acquaint themselves with all aspects involved.
- 2.2 Arrangements to visit the site and confirmation of the date and time of the site inspection shall be made with Transnet Engineering Contract Manager.
- 2.3 The site inspection certificate shall be completed and countersigned by the Contract Manager on the day of the visit and must be submitted with the tender documents.

3. INFORMATION REQUIRED

- 3.1 Offers will not be considered unless full particulars and sufficient literature are provided at the tendering stage to enable Transnet Engineering Technical Officers the opportunity to assess each technical offer properly.
- 3.2 Prospective Contractors will complete the relevant questionnaire in full and must indicate whether their offer complies with each item of the specification
- 3.3 Should there be insufficient space for furnishing full details; contractors shall provide the additional details in their covering letter. The additional details shall be numbered in accordance with the applicable clause specified in the specification.
- 3.4 As prospective contractors are considered to be experts in their field, they are obliged to identify any shortcomings, such as omissions or sub-standard requirements, to the completeness of this specification. These must be brought to the attention of Transnet Engineering at tender stage with alternatives to address these shortcomings. However, each offer shall be quoted for separately.

4.

Signature of Bidder/s: _____

Date: _____

4. TECHNICAL REQUIREMENTS

The following regulation and codes must be complied with:-

- **SANS 10142-1 : The wiring of premises Part 1: Low-voltage installations.**

- 4.1 Except where otherwise provided for in the specification, all equipment offered will comply with the requirements of the relevant standard specifications of the SABS, if published, otherwise with the relevant standard of the British Standards Institution in force at the time of tendering.
- 4.2 Where equipment offered complies with the recognized standards of the country of manufacture and not specifically with the standards required by this specification, such equipment will be considered at the discretion of Management. In this case, tenders shall state fully all respects in which the equipment departs from the standard laid down in this specification.
- 4.3 The successful tender will at the conclusion of the installation provide a document along the lines "that the installation complies with national/international requirements and that all selected /designed items are compliant with Act 85 of 1993 and SABS practices applicable to the installation. The equipment has been commissioned/ calibrated and employees as specified have been trained and found competent to operate the plant."

5. SPECIFIC REQUIREMENTS

Any person with the intention of procuring the equipment or material shall ensure that the information below is complied with.

5.1. Scope of work

ITEM	This scope of work document covers the minimum requirements	DETAILS OF OFFER Comply (Yes) / Do not comply (No)
5.1.1	<p>This scope of work shall be read with Annexure 1 (Transnet Engineering Safety, Health and Environmental Management specification) and contractor management SOP 014.</p> <p>- Bidders shall include costs of Health, Safety and Environmental Management compliance.</p>	
5.1.2	<p>Supply, repair, configuration, testing and commissioning of CCTV camera system which must be compatible with the existing system, as listed on the attached Annexure 2 .</p> <ul style="list-style-type: none"> • Further details of the specific requirements are covered under 5.1.5. • Bidders to attend the compulsory sit meeting. • The details of the existing CCTV camera systems are attached on Annexure 2 including Durban Main Centre, Rotating Machines Depot (RM), Electrical Locomotives Depot (ELD), Coil Shop and Wentworth Depot. 	
5.1.3	<ul style="list-style-type: none"> • The bidder to have ability of working on the existing CCTV camera system and shall have PSIRA registration (company registration and operator's registration). All necessary certificates and proof of registration shall be attached. • The bidder to have licencing, certification and access for all relevant Softwares and applications for the existing. 	

Signature of Bidder/s: _____

Date: _____

5.1.4	The successful contractor shall be liable for any damage caused to Transnet Engineering existing property, as a result of their action(s). Any damage caused by a contractor shall be rectified by a contractor at his / her own expense.	
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Specific requirements continued

5.1.5 Specific requirements continued

Item no.	(Durban Main Centre) 1 st page
1	Supply, delivery, repair, replacement, installation, testing and commissioning of CCTV camera system, including training of operators. Minimum of 6 operators.
2	BVMS Software Maintenance SMA Licence for MBV-BPRO, non-expiry licence. The non-expiry licences similar or equivalent to BVMS Software Maintenance SMA Licence for MBV-BPRO licences, suitable for the current CCTV camera system are acceptable and may be proposed.
3	BVMS Software Maintenance SMA Licence for MBV-XCHANPRO, non-expiry licence. The non-expiry licence similar or equivalent to BVMS Software Maintenance SMA Licence for MBV-XCHANPRO, suitable for the current CCTV camera system are acceptable and may be proposed.
4	BVMS SMA license XWST for MBV-XWSTPRO, non-expiry licence. The non-expiry licence similar or equivalent to BVMS SMA license XWST for MBV-XWSTPRO, suitable for the current CCTV camera system are acceptable and may be proposed.
5	BVMS Software Maintenance SMA license for MBV-XKBDPRO, non-expiry licence. The non-expiry licence similar or equivalent to BVMS Software Maintenance SMA license for MBV-XKBDPRO, suitable for the current CCTV camera system are acceptable and may be proposed.
6	DIVAR IP all-in-one 7000 Management appliance, 3U 16X12TB 3rd gen. The similar or equivalent recorders which are compatible with the current CCTV camera system are acceptable and may be proposed.
7	Standard Application Server.
8	ZBV4 Workstation PC. The Workstation PC's similar or equivalent to ZBV4 Workstation PC, which are compatible with the current CCTV camera system are acceptable and may be proposed.
9	Keyboard, USB CCTV oriented.
10	10 way PDU with Surge.
11	48P PoE 1440W MANAGED NETWORK SWITCH . The network switches similar or equivalent to 48P PoE 1440W managed network switch, which are compatible with the current CCTV camera system are acceptable and may be proposed.
12	HDMI Cable Lead 30m.
13	Wireless Keyboard / Mouse with Rechargeable batteries and spare set.
14	24" LED Monitor with IPS panel and Borderless Design.
15	10 KVA UPS Online 4Hrs Runtime.
16	3 KVA UPS Online 4Hrs Runtime.
17	24P PoE 720W Managed Network Switch. The network switches similar or equivalent to 24P PoE 720W Managed Network Switch, which are compatible with the current CCTV camera system are acceptable and may be proposed.
18	Clearline Gigabit 24 Port Lightning & Surge Protector (POE).
19	19-inch Rack Mount Brush Panel.
20	Cage Nuts.
21	8-Port USB HDMI/Audio KVM Switch ATEN. The network switches similar or equivalent to 8-Port USB HDMI/Audio KVM Switch ATEN, which are compatible with the current CCTV camera system are acceptable and may be proposed.

Signature of Bidder/s: _____

Date: _____

Item no.	(Durban Main Centre) 2 nd page
22	Cat6e Patch Leads 2m.
23	Ubiquiti Grounded Ethernet Surge Protector ETH-SP-G2. The surge protectors similar or equivalent to Ubiquiti Grounded Ethernet ETH-SP-G2 Surge Protectors, which are compatible with the current CCTV camera system are acceptable and may be proposed.
24	Dedicated Plug tops
25	4way fan tray
26	Rack netting 42U
27	Small Materials allowance
28	Installation
29	Labelling
30	As Built Drawings
31	Health and safety File
32	Commissioning
33	Project Management
34	Training
35	1 Year Maintenance SLA
36	Static cameras Dinion IP starlight 7000 (PEMM stores x 4, Nagoya x 2, Bay 1 x 6 and Bay 2 x 6) including installation and cabling). The static cameras similar or equivalent to Dinion IP starlight 7000 (including lenses, the cabling) static cameras, which are compatible with the current CCTV camera system are acceptable and may be proposed.
37	Supply and install static cameras Dinion IP starlight 7000 (include lens, the cabling and housing are existing), at Bay 9, Bay 24, Bay 26, Bay 28 Bay 32, Bay 33, Bay 36, Bay 37, Bay 38, Bay 39, Bay 40, Bay 41, Bay 42 Bay 44, Bay 46, Bay 58, Bay 59, Bay 60, Bay 61, Bay 64 and Bay 65. The static cameras similar or equivalent to Dinion IP starlight 7000 (include lenses, the cabling) static cameras, which are compatible with the current CCTV camera system are acceptable and may be proposed.
38	Bosch Indoor mini domes (include housing and cabling) inside Human capital reception and permit office. The mini domes cameras similar or equivalent to Bosch Indoor mini domes (including housings and cabling), which are compatible with the current CCTV camera system are acceptable and may be proposed.

7.

Signature of Bidder/s: _____

Date: _____

Item no.	(RM, ELD and COIL SHOP Depots) 1 st page
1	Supply, delivery, installation, testing and commissioning of CCTV camera system, including training of operators.
2	Dinion IP 7000 NBN-733V-P+ 720P lens. The lens similar or equivalent to Dionion IP 7000 NBN-733V-P+ 720P lens lenses, which are compatible with the current CCTV camera system are acceptable and may be proposed.
3	PTZ cameras VGS-7220-EPC 4+ Auto dome. The cameras similar or equivalent to PTZ cameras VGS-7220-EPC 4+ Auto dome cameras, which are compatible with the current CCTV camera system are acceptable and may be proposed.
4	DIVAR IP all-in-one 7000 Management appliance, 3U 16X12TB 3rd gen. The recorders similar or equivalent DIVAR IP all-in-one 7000 Management appliance, 3U 16X12TB 3rd gen recorders, which are compatible with the current CCTV camera system are acceptable and may be proposed.
5	DIVAR IP License Plus base for DIP AIO 6000-7000. The licence similar or equivalent to DIVAR IP License Plus base for DIP AIO 6000-7000, suitable for the current CCTV camera system is acceptable and may be proposed.
6	BVMS Software Maintenance SMA license for MBV-BPLU-DIP, non-expiry licence. The similar or equivalent license which is suitable for the current CCTV camera system is acceptable and may be proposed.
7	DIVAR IP Expansion License Camera/decoder expansion. The license similar or equivalent to DIVAR IP Expansion License Camera/decoder expansion, suitable for the current CCTV camera system is acceptable and may be proposed .
8	BVMS Software Maintenance SMA license for MBV-XCHANPLU, non-expiry licence. The non-expiry licence similar or equivalent to BVMS Software Maintenance SMA license for MBV-XCHANPLU licences, which are suitable for the current CCTV camera system are acceptable and may be proposed.
9	ZBV4 Workstation PC. The Workstation PC's similar or equivalent ZBV4 Workstation PC Workstation PC's, which are compatible with the current CCTV camera system are acceptable and may be proposed.
10	Keyboard, USB CCTV oriented.
11	BOSCH UHO-HGS-11. The outdoor camera housings similar or equivalent to BOSCH UHO-HGS-11 housings, which are compatible with current CCTV camera system are acceptable and may be proposed.
12	PTZ Pendant Mount Bracket.
13	PTZ Pole Mount Bracket.
14	POE 60W Midspans.
15	CCTV Transmission HDMI Cable Gold Plated Connectors 5M.
16	24" LED Monitor with IPS panel and Borderless Design.
17	32" UHD Monitor.
18	Wireless Keyboard / Mouse with Rechargeable batteries and spare set.
19	Wall Mount Bracket Pan tilt.
20	42U 1M Deep Cabinet 4 Fans & 3 Shelves.
21	1 KVA UPS Online.
22	3 KVA UPS Online.
23	10 way PDU with Surge.
24	6 way PDU with Surge.
25	Ubiquiti Grounded Ethernet Surge Protector ETH-SP-G2. The Surge Protectors similar or equivalent to Surge Ubiquiti Grounded Ethernet Surge Protector ETH-SP-G2 Protectors, which are compatible with the current CCTV camera system are acceptable and may be proposed.
26	Cat6e STP Cable.
27	RJ45 Cat6 Shielded FTP Modular Plug .
28	Grey Boots for RJ45-6FTP.

Signature of Bidder/s: _____

Date: _____

Item no.	(RM, ELD and COIL SHOP Depots), 2 nd page
29	Dedicated Plug tops.
30	19-inch Rack Mount Brush Panel
31	19-inch Rack Mount 1U Blank Panel
32	EMC Switch P-ON L2 24 ports RJ45 1GbE 12 ports PoE. The switches similar or equivalent to EMC Switch P-ON L2 24 ports RJ45 1GbE 12 ports PoE, which are compatible with the current CCTV camera system are acceptable and may be proposed.
33	1.0mm 3 Core Cabtryre
34	48 Port Fibre Patch Panel fully Populated LCSMDPLX
35	Brush Panel
36	Patch Leads LCSMDPLX
37	Unjacketed Pigtauls LCSMDPLX
38	Splicing, Preparation and OTDR
39	48V 120mm Fans
40	12V 20Ah Batteries
41	48V 100Ah Battery Protector
42	48V 1000W Meanwell Battery Charger. The battery chargers similar or equivalent with 48V 1000W Meanwell, which are compatible with the current CCTV camera system are acceptable and may be proposed.
43	Small Materials allowance
44	Installation
45	Labelling
46	As-built Drawings
47	Health and safety File
48	Commissioning
49	Project Management
50	Training
51	1 Year Maintenance SLA
52	Supply and install static cameras Dinion IP starlight 7000 (include lens, the cabling and housing at ELD main entrance gate, RM main entrance gate. The static cameras similar or equivalent with Dinion IP starlight 7000, which are compatible with the current CCTV camera system are acceptable and may be proposed.

Item no.	(Wentworth Depot)	Qty	Price
1.	Move the existing equipment to lockable supervisor's office	1	
2.	Re-instate test and commission	1	

Grand -Total (Excl. VAT) to tender form

R

10.

Signature of Bidder/s: _____

Date: _____

5.1.6 Operating Environment

- Dusty, very hot, water splashes and areas with smoke.
- All bays have automatic lighting, however cameras with night vision are required.

5.1.7 Markings

- Appropriate markings required by an applicable standard for equipment and installation required shall be indelible and only removable by deliberate intent.

5.1.8 Testing

- All angle viewing plus zooming in and all lighting condition tests shall be conducted.
- All other tests that are required by any applicable SABS standards including SANS 10222-5-2:2007/BS EN 50132-7:1997, MOD, Ed.1 (Electrical security installations Part 5-2: CCTV installations – Application guidelines) shall be performed to the satisfaction of the Plant engineer, risk Officials and security personnel.

5.1.9 Commissioning

- All the tests certificates referred to above and supply of all requirements referred to in the scope of work shall be supplied.
- Supply of all electrical certificates of compliance.
- Supply of all manuals including standard operating procedures, standard maintenance procedures for all equipment in three sets.
- Supply all wiring and cabling diagrams in three sets.
- Supply soft copies of the software used in three sets.

5.1.10 Spares

- The successful tenderer shall supply Transnet Engineering with the specifications of all critical parts list for all equipment supplied and installed.

5.1.11 Warranty

- All new equipment supplied shall have a 3 year free swap-out warranty from date of purchase.

5.1.12 After-Sales Service

- All materials and equipment used shall be standard components, regularly manufactured and utilised and be available on short notice (Maximum of two weeks delivery) for replacement.

6. OTHER INFORMATION RELATED TO THE SCOPE

6.1 This specification states the minimum requirements relating to the work and in no way absolves the contractor from responsibility for sound ethical practice. Any omissions or sub-standard requirements of this specification must be brought to the attention of Transnet Engineering at tender stage and optional prices for addressing such omissions must be provided.

6.2 Any matter relating to this work, which requires a decision from Transnet Engineering shall be presented to the Project Manager in charge.

6.3 All offers shall be completed in every respect with this specification. Only completed / responsive tenders will be considered.

6.4 The Technical Officer reserves the right to have the proposal checked independently by a third party.

11.

Signature of Bidder/s: _____

Date: _____

6.5 Tenders must allow for monthly progress and clarification meetings on site initially and after commissioning for defect meetings when required. A meeting will be held after issuing of the tender to establish the exact scope and magnitude of the contract. No tender will be considered unless it has this certificate signed by the Engineer or his representative.

7. HEALTH AND SAFETY REQUIREMENTS

7.1 All equipment and installation whether detailed in this specification or not shall comply with the requirements of the Occupational Health and Safety Act 85 of 1993 as amended and all other applicable legislation including specific set of regulations and local authority bylaws where applicable.

The sudden power losses must not have an adverse effect on equipment and shall not unduly delay return to operation after power is restored.

7.2 All the necessary safety equipment such as guards over rotating equipment shall be supplied and the equipment shall comply fully with all the requirements of the South African Occupational Health and Safety Act, Act 85 of 1993 and all other applicable legislation including specific set of regulations and local authority bylaws where applicable. At all times during the manufacture, assembly and testing of the equipment the contractor will be responsible for the safety of all persons on site and the equipment.

7.3 SHE SPECIFICATION

Prior to commencement of contract, the contractor shall be issued with a SHE specification in order to compile a SHE file in line with TE requirements.

Prior to establishing on site, it is an explicit requirement of this contract that all of the Contractor's personnel directly involved with this contract, including those of sub-contractors, attend a **Safety induction course**. Transnet will provide the course free of charge and attendance is compulsory for all personnel under the control of the Contractor who, during the duration of the contract, will be present on site whether on a full time or adhoc basis.

The contractor must allow for all additional charges because of these requirements as no claims for extras will be accepted in connection with the foregoing.

7.4 As part of the legislative and TE SHE requirements.

The successful contractor is required to conduct a Risk assessment to ascertain all potential risks associated with this project. The completed risk assessment is to be formally submitted to the Risk department via the project manager at least two weeks prior to the commencement of the actual project. A safety file and associated documents will be required from a successful tenderer and such will be communicated by the Risk department.

8. SPECIALIST SUB-CONTRACTORS

8.1 Only specialist sub-contractors who have previously successfully completed work of the type and extent specified in this document should be engaged.
The tenderer shall provide the technical officer with sufficient proof of having suitable experience regarding the design and manufacturing of similar equipment. To this end, complete and detailed reference list shall be submitted with the tender. Reference list shall include addresses as well as contact person who may be visited for inspection of the equipment during the adjudication period.

8.2 The tender shall submit a complete list of proposed sub-contractors and suppliers of major components with his tender.

12.

Signature of Bidder/s: _____

Date: _____

8.3 The tenderer shall be prepared to commit themselves in writing to the technical officer with an adequate, experienced and stable project team for the duration of the contract.

8.4 Transnet Engineering will not consider any Tenderer's offer that, in the sole opinion of Transnet Engineering, does not have adequate experience in the design and manufacture of such equipment.

8.5 Contractors shall do the installation simultaneously with other contractors on-site busy with other work and shall plan work that it integrates with other work performed.

9. MATERIAL AND WORKMANSHIP

9.1 The equipment shall be offered complete in all respects, including all standard components normally offered by manufacturers, all of which shall be specified in detail.

9.2 The equipment, as made and supplied, shall be complete in every respect, of modern design, using the most advanced proven technology extensively supported by reputable local companies, and be built to good engineering and technological practices. Tenderers shall supply a list of all the main components proposed as well as the addresses of local the support companies.

9.3 All parts and components shall be adequately protected against damage and corrosion during shipping, transport and storage.

Should any of the items called for be standard equipment, then the words "Standard Equipment" shall appear against the item.

9.4 The cameras shall be stable and drain sufficient to prevent accumulation of water.

9.5 The equipment, as made and supplied, shall be complete in every respect, of modern design, using the most advanced proven technology extensively supported by reputable local companies and be built to good engineering practices.

10. GENERAL REQUIREMENTS

Operation will be in the following conditions:

Altitude	Sea level
Ambient temperature	0°C to 45°C
Relative humidity	50% to 100%
Atmosphere	Heavy saline

10.1 Tenderers shall indicate clause-by-clause either that they comply in every respect with the specific requirements, or if not, exactly how it differs.

11. DEFINITIONS AND ABBREVIATIONS

CLIENT	Transnet Engineering
TECHNICAL OFFICER	Project Manager, Transnet Engineering Durban
CONTRACTOR	Contractor appointed under this specification document
SABS	South African Bureau of Standards
BS	British Standard Specification
FEM	Federation of European Mechanical Handling Standard
ISO	International Organisation for Standardisation

13.

Signature of Bidder/s: _____

Date: _____

12. GENERAL

- 12.1 The successful tenderer will be subjected to a workshop inspection by Transnet Engineering, to ensure that the facilities are to the satisfaction of the Transnet Engineering in terms of the quality control and equipment capabilities for manufacturing such type of equipment.
- 12.2 The tenderers shall guarantee that the rating and size etc. of the equipment offered, will be adequate to perform the duties required.

13. SITE ESTABLISHMENT

- 13.1 The contractor shall be solely responsible for safety of his staff and for providing security to safeguard his works and material on site, until such a time.
- 13.2 The contractor shall be required to attend site meetings when convened by the Project Leader controlling the contract.
- 13.3 The contractor will be responsible for any damages caused by his staff to the building and civil works on site.

14 PENALTY CLAUSES

- 14.1 Due to the criticality of this project, penalties will be levied for late deliveries.

14.

Date: _____

Signature of Bidder/s: _____