Eskom	Technical Specifications	Majuba Power Station

Title: **Internal Roads Technical Specification**

Document Identifier:	**559-1777465469**
Alternative Reference Number:	**N/A**
Area of Applicability:	**Majuba Power Station**
Functional Area:	**Engineering**
Revision:	**1**
Total Pages:	**21**
Next Review Date:	**N/A**
Disclosure Classification:	**Controlled Disclosure**

Compiled by	Supported by	Functional Responsibility	Authorized by
Mpumelelo Mnisi	**Riaan Venter**	**Sinothi Buthelezi**	**Johan Swanepoel**
Civil Engineer	**Chief Civil engineer**	**Auxiliary Engineering Manager**	**Middle Engineering Manager**
Date: 07.02.2025	Date: 07.02.2025	Date: 10/02/2025	Date: 2025/02/10

Content

Page

1. Introduction

Majuba power station is situated in the province of Mpumalanga, between the towns of Volksrust and Amersfoort. It comprises of six generating units, Units 1-3 each capable of providing 657MW and Units 4-6 each capable of providing 713MW. The internal roads inside Majuba Power Station are severely deteriorated some having surface failures and some having failures through the subbase and fill. This is resulting in the deterioration of riding quality of the roads and increased routine road maintenance cost. The pavement layers are currently in a bad condition on certain sections, also adversely affecting ash and coal haul operations and normal use by passenger vehicles to both access the station and drive around.

It is suspected that the roads (Contractor's yard, Ring, Ash Haul 1 and 2) have reached their structural traffic loading capacities. This is due to excessive number of heavy vehicles and other factors such as lack of routine preventative maintenance and therefore pavement rehabilitation of these roads is required. The section of the road after weighbridge needs to be reconstructed to resolve the issue of muddy gravel road during rainy season.

1.1 Scope

This document covers the minimum technical specification applicable to construction/rehabilitation of internal roads in the Majuba Power Station. The scope of work includes the following:

- Road pavement rehabilitation
- Road Markings

These roads will be rehabilitated as they have reached their structural capabilities. The following roads are included in the project:

- Contractor's yard road network
- Ring road south
- Ash haul road 1
- Ash haul road 2
- Weigh bridge road

1.1.1 Purpose

The purpose of this document is to describe in detail the scope of supply and services required from potential Contractors and describe the technical criteria to which works are to be constructed to.

1.1.2 Applicability

This document is applicable to Majuba Power Station.

1.1.3 Effective date

The document is effective from the authorisation date.

1.2 Normative/Informative References

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

1.2.1 Normative

[1] ISO 9001 Quality Management Systems.

[2] OHS ACT Occupational Health and Safety Act, No 85 of 1993.

[3] National Environmental Management Act 1998

[4] National Environmental Management Waste Act No 59 of 2008

[1] 240 -53114002: Engineering Change Management Procedure

[2] 240-76992014: Project/Plant Specific Technical Documents and Records Management Work Instruction

[3] 240-53113685: Design Review Procedure

[4] 240-53113953: Manage Engineering Accountability Procedure

[5] 240-53114002: Engineering Change Management Procedure

[6] 240-53114026: Project Engineering Change Management Procedure

[7] 240-53114186: Document and Records Management

[8] GGS0462 Eskom – Quality requirements for Engineering and Construction works.

[9] COLTO - Standard specification for road and bridge works for state road authorities (1998 Edition)

[10] South African Pavement Engineering Manual (SANRAL)

[11] Road Route Maintenance Manual (SANRAL)

[12] Technical Methods for Highway

[13] Technical Recommendations for Highways

[14] 240-84418186: Road Specification Manual

[15] 240-142483465: Guidelines on Maintenance and Rehabilitation of Roads

1.2.2 Informative

N/A

1.3 Definitions

Definition	Description
Employer	Eskom Generation
Consultant	Service provider consultant to provide a specific service to Eskom, Majuba Power Station
Project Engineering Team	Eskom Majuba Power Station Engineering representative

1.3.1 Document:

N/A

1.4 Abbreviations

Abbreviation	Explanation
NEMA	National Environmental Management Act
OHS	Occupational Health and Safety Act
SoW	Scope of Works
CoE	Centre of Excellence
CM	Configuration Management
CV	Curriculum Vitae
ECSA	Engineering Council of South Africa
EDMS	Eskom Document Management System
OHS	Occupational Health and Safety
N/A	Not Applicable
PI	Payment Instruction
ROC	Required Operational Capability
QCP	Quality Control Plan
SHE	Safety, Health, Environment
WI	Works Information

1.5 Roles and Responsibilities

Person	Responsibility
Contractor	Performs Contractor related activities
Lead Discipline Engineer	The role of the Lead Discipline Engineering is to manage the technical integrity of the design and be accountable for the management of the interfaces within their specific engineering domain
Majuba Quality Team	Ensure that the *Employer's* requirements as described or specified in Consultant Scope of Work are met in full and verified as such to *Employer* satisfaction

Project Engineering Team	Ensures technical integrity of a fully functional and operational plant that meets the user requirement and Eskom Engineering expectations and requirements.

1.6 Process for Monitoring

Not applicable.

1.7 Related/Supporting Documents

Not applicable.

2. Technical Specification

2.1 Overview of the Project Area

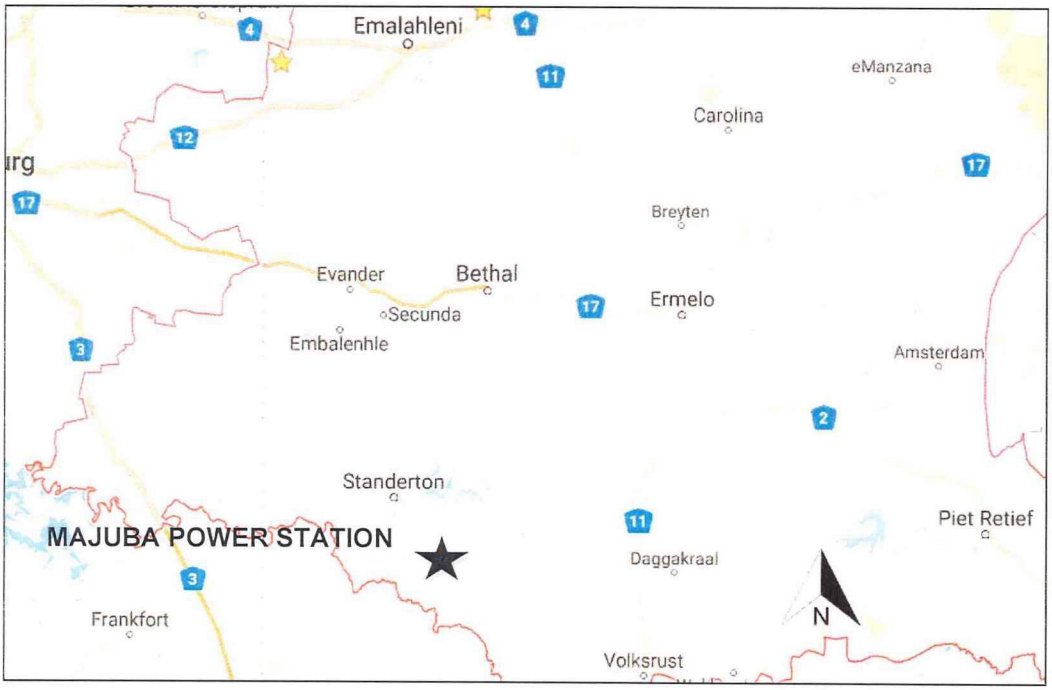

Figure 1: Locality Plan showing Majuba Power Station

The project area is within Majuba Power Station which is located roughly 40km North of the town of Volksrust and 20km West of Daggakraal within the province of Mpumalanga.

The approximate coordinates of the access gate tor the station are as follows:

Latitude 27° 06' 12, 28" S

Longitude 29° 46' 42, 34" E

The locality of the Majuba Power Station is shown in Figure 1

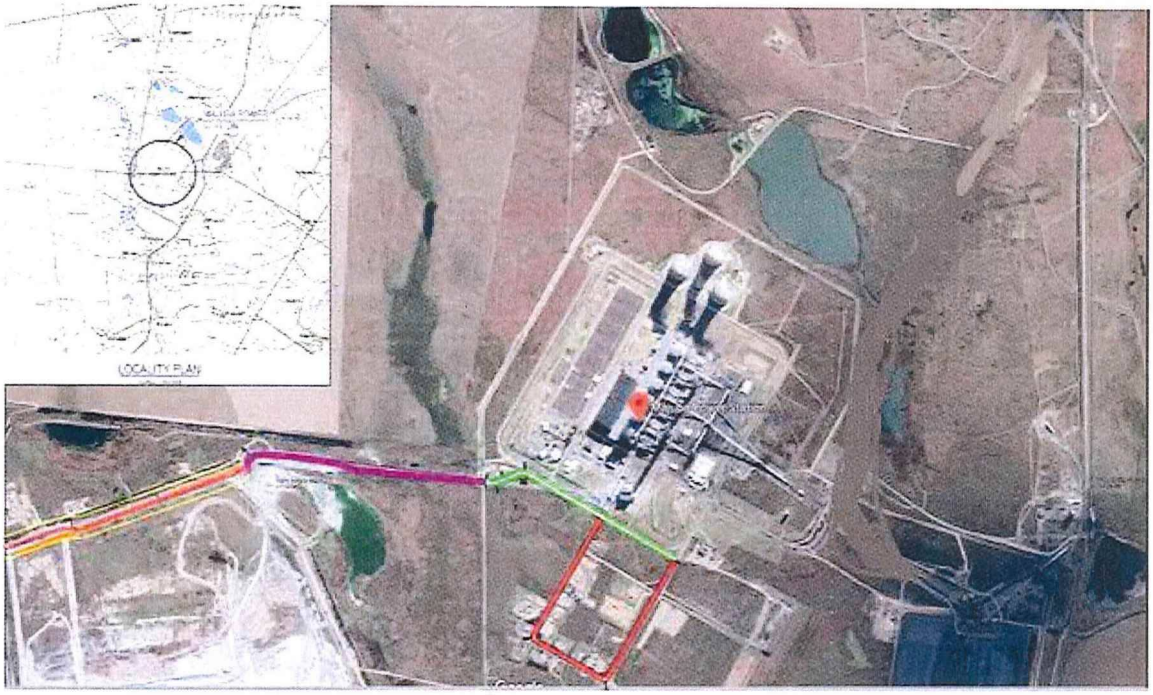

Figure 2: Internal Roads that require Rehabilitation/ Reconstruction

Legend	Road Name	Road Length(m)
	CONTRACTOR'S YARD ROAD NETWORK	≈1663
	RING ROAD SOUTH	≈990
	ASH HAUL ROAD 1	≈1155
	ASH HAUL ROAD 2	≈1236

2.2 Employer's objectives and purpose of the works

The Employer's objective is to:

- Rehabilitate current damaged internal roads to provide a functional and safe road system capable of handling the expected traffic loadings.

Implementation of the works is a current top priority for the station and the project is therefore subjected to strict deadlines. The contractor is expected to adhere to the overall project duration deadline with no sacrifice to the quality and aesthetics of the deliverables.

2.3 Employers Road Design

High Level Description of the scope of works

The roads subjected to rehabilitation comprises of the following:

[1] Contractor's Yard Road Network

- Rehabilitate the existing road to maintain the original design or condition with a length ≈1663m
- Shaping of terrain

[2] Ash Haul Road 1

- Rehabilitate the existing road to maintain the original design or condition with a length ≈1155m

[3] Ash Haul Road 2

- Rehabilitate of existing road including embankment shaping with a length ≈1236m

[4] Ring Road South

- Rehabilitate the existing road to maintain the original design or condition with a length ≈990m

[5] Weighbridge section

- Design and Reconstruct the road with a length approximately 260m.

3. Design properties

3.1 Roads Design Properties

Eskom No	Scope of Work Description	Drawing Title	Drawing No
1	**CONTRACTOR'S YARDS ROADS** Resurface the entire length of contractor's yard road to its initial design condition. The existing surface of road is to be removed to the top of the base layer and The base layer must be ripped and re-compacted to a depth of 150mm @ 95% MOD AASHTO and followed by a 40mm continuously graded TPA medium asphalt. Vertical Alignment to remain unchanged.	Majuba Power Station - Roads Rehabilitation Project - Surface / Base Repair - Contractor Yard's Roads - CH0 - CH1663	0.66/100427 SH1

	* All Intersections to be surfaced with 40mm continuously graded TPA medium asphalt to a distance 10m from left and right road edges, existing in-situ material to be ripped and re-compacted to a depth of 150mm @ 93% Mod AASHTO prior to surfacing. **Roads Markings** Non-reflectorized paint applied at nominal rate of 0.42 l/m^2 and retro-reflective beads to be added. Contractors' yards roads and All Intersections to be marked with type GM1- Standard - White paint (as per SARTSM vol. 4) along the road Centrelines.		
2	**RING ROAD SOUTH** Resurface the entire length of the ring road south to its initial design condition. **Surface and Base Repair**: The road will have the same final road level as the existing level. The existing asphalt will be removed and spoiled. The base layer will be ripped and re-compacted to a depth of 150mm @ 95% MOD AASHTO, followed by 40mm continuously graded TPA medium asphalt. Vertical alignment to remain unchanged. **Asphalt Overlay:** 40mm continuously graded TPA medium asphalt overlay, 7.4m road width. **Roads Markings** Non-reflectorized paint applied at nominal rate of 0.42 l/m^2 and retro-reflective beads to be added. Ring road south (990m) to be marked with type GM1- Standard -	Majuba Power Station - Roads Rehabilitation Project - Surface / Base Repair - Southern Ring Road - CH0 – CH990	0.66/100428 SH1

	White paint (as per SARTSM vol. 4) along the road Centrelines.		
3	**ASH HAUL ROAD 1,** Rehabilitate the ash haul road 1 and resurface the entire length to its initial state of design. 8.00m wide, the road will have the same final road level as the existing level. The existing asphalt will be removed and spoiled. The roadbed will be ripped and re-compacted, to a depth of 150mm @ 95% MOD AASHTO, followed by 40mm continuously graded TPA medium asphalt. **Roads Markings** Non-reflectorized paint applied at nominal rate of 0.42 l/m^2 and retro-reflective beads to be added. Ash Haul Road 1 (1155m) to be marked with type GM1- Standard - White paint (as per SARTSM vol. 4) along the road Centrelines.	Majuba Power Station - Roads Rehabilitation Project - Surface / Base Repair - Ash Haul Road 1 - CH0 - CH1155	0.66/100429 SH1
4	**ASH HAUL ROAD 2,** Construct the road as per the drawings. 8m wide road, the final road level and layer works as per the drawings. **Roads Markings** Non-reflectorized paint applied at nominal rate of 0.42 l/m^2 and retro-reflective beads to be added. Ash Haul Road 2 (1236m) to be marked with type GM1- Standard - White paint (as per SARTSM vol. 4) along the road Centrelines.	Majuba Power Station - Roads Rehabilitation Project - Plan, Profile & Typical Cross Section - Ash Haul Road 2 - CH0 - CH420 Majuba Power Station - Roads Rehabilitation Project - Plan & Profile -Ash Haul Road 2 - CH 420 - CH840 Majuba Power Station - Roads Rehabilitation Project - Plan & Profile -Ash Haul	0.66/100430 SH1 0.66/100430 SH2 0.66/100430 SH3

		Road 2 - CH840 - CH1236	0.66/100431 SH1
		Majuba Power Station - Roads Rehabilitation Project - Ash Haul Road 2 - Cross Sections - CH0 - CH150	0.66/100431 SH2
		Majuba Power Station - Roads Rehabilitation Project - Ash Haul Road 2 - Cross Sections - CH200 - CH350	0.66/100431 SH3
		Majuba Power Station - Roads Rehabilitation Project - Ash Haul Road 2 - Cross Sections - CH400 - CH550	0.66/100431 SH4 0.66/100431 SH5
		Majuba Power Station - Roads Rehabilitation Project - Ash Haul Road 2 - Cross Sections - CH600 - CH750	0.66/100431 SH6
		Majuba Power Station - Roads Rehabilitation Project - Ash Haul Road 2 - Cross Sections - CH800 - CH950	0.66/100431 SH7

		Majuba Power Station - Roads Rehabilitation Project - Ash Haul Road 2 - Cross Sections - CH1000 - CH1100 Majuba Power Station - Roads Rehabilitation Project - Ash Haul Road 2 - Cross Sections - CH1150 - CH1236.3	

3.2 Weighbridge road

Figure 3: Road Section after the weighbridge

The figure 3 represent the section of the road that must be designed and constructed. The Label (A) on the figure 3 is entrance and exit for the side tipper trucks. It allows for two trucks to enter and two trucks to exit at the same time.

The road between A to B should be four lanes. The road section E to B should be one lane. Road section E to D should be two lanes. D is the truck washbay.

The following is provided to assist with the design of the road.

- The road receives around 800 side tipper trucks a day with two trailers.
- The road must be an asphalt type.
- The road should be classified as Access road.
- The road markings must be type GM1- Standard - White paint (as per SARTSM vol. 4) along the road Centrelines as well as the yellow paint as per the standard.
- The road must have necessary drainage system to mitigate flooding during rainy season

A survey of the area for the proposed access road must be done by a qualified surveyor taking into consideration the fact that the actual road may be situated anywhere within the road servitude. The Surveyor must ensure that there are a sufficient number of benchmarks as well as surveyed points to establish a detailed contoured surface in order to complete design. The survey should also identify position of existing servitudes. This shall include but not be limited to Culverts, Kerbs, Manholes, Railway Servitudes, Telephone Servitudes, Sewer Servitudes, Potable Water Servitudes, Electrical lines, Fences, Gates, Watercourses, existing infrastructure, road reserve boundary, etc.

The completed survey drawings should then be handed over to a Professional Civil Engineer for geometric design and pavement design.

A Geotechnical Investigation (DCP test) should be conducted to determine the quality and usability of underlying material in accordance with TRH2 (1978): Geotechnical and Soil Engineering Mapping for Roads and the Storage of Materials Data.

3.3 Testing Specification

During the progress of the works tests as per the section below, are conducted on materials and workmanship to ensure compliance with the requirements of the specifications.

3.4 Testing methods

All tests are conducted in accordance with the standard methods specified in the following, in order of precedence:

- Standard methods for testing road construction materials (SANS 3001 and TMH6) and for calibration (TMH2), compiled by the Committee of State Road Authorities (CSRA) and published by the Department of Transport as part of the series Technical Methods for Highways.
- South African National Standards specifications, test methods, codes of practice and co-ordinating specifications (abbreviated as SANS and CKS).
- Testing regime shall comply with COLTO – (Standard specification for road and bridge works for state road authorities (1998 Edition) and TRH 5 standard deviation measurement.
- The specifications of the American Society for Testing and Materials (abbreviated as ASTM).
- The specifications of the American Association of State Highway and Transportation Officials (abbreviated as AASHTO).

In addition to the above standard methods of testing, standards specifications or test methods of other bodies may also be referred to in these specifications, or test methods may be described where no acceptable standard methods exist.

3.5 CONTRACTOR REQUIREMENTS:

The *Contractor* is required to:

i. Adhere to the South African Environment Protection Act, the waste management code of practice and the South African Occupational Health and Safety Act No. 85 of 1993, the regulations promulgated thereunder and Eskom Safety, Health, Environment and Quality (SHEQ) Policy 32-727 for all *works*.

ii. Submit a comprehensive method statement of the entire *works* to the *Project Manager* for acceptance prior to the start of the *works*
iii. Submit a project specific safety file to the *Employer* for comments / acceptance.
iv. Submit a detailed level 3 schedule for the *works* to the *Project Manager* for acceptance after contract award.
v. The waste disposal site is selected to suit the classification of the materials to be disposed of. Certificates of disposal are required to be submitted to the *Employer*.
vi. Manage his access to the working areas and the Site.
vii. Manage his activities on Site to ensure that no interference takes place between his work and that of others.
viii. Complete "Contract Activities Daily Reports".
ix. Liaise with the *Supervisor* regarding utilities and telephone facilities required for his Site establishment.
x. Liaise with the *Supervisor* regarding the location of waste disposal sites and rubbish dumps,
xi. Maintain and promote labour harmony on the Site and in the working environment.
xii. Immediately report any potential labour disharmony to the *Project Manager* or *Supervisor* Resolution of any labour disharmony is the responsibility of the *Contractor.*
xiii. Not recruit or employ any personnel from the *Employer* and Others, without prior acceptance of the *Project Manager*.

Key Requirements

(1) The *Contractor* provides all plant, equipment, materials, services, and labour and executes all work necessary to provide the works.
(2) The works provided will be complete and fully functional in every respect and includes all required accessories and auxiliaries.
(3) The *Contractor* provides all necessary equipment required for testing, installation, and commissioning.
(4) The *Contractor* assumes final responsibility to ensure that the works complies with all requirements as specified in this document, and any other governing laws or codes.
(5) The *Contractor* provides the works in accordance with internationally accepted engineering practices and standards.
(6) All equipment provided for the Works is proven in use in industrial and power plant applications. No equipment not previously used in power plant safety applications will be provided.
(7) The *Contractor* is responsible for the rehabilitation and construction of all associated items in accordance with the detailed drawings and specifications.

(8) The *Contractor* disposes of all demolition waste at a licenced waste disposal site to be accepted by the Project Manager. The waste disposal site is selected to suit the classification of the materials to be disposed of. Certificates of disposal are required to be submitted to the Employer.

Project Execution Methodology

(1) The Contractor undertakes all the activities as listed below:

i. Detailed engineering,

ii. Installation,

Detail Engineering

(1) Detailed engineering is defined as being all activities required to translate the *Contractor*'s scope of works, as defined in the works, into fully functional system(s).

(2) As a minimum, detail engineering consists of the following activities:

i. Plant investigation work – during which the Contractor conducts his plant investigation work.

ii. Scope definition – during which detailed scope definition and clarifications are performed.

iii. Detail Design - development, technical clarification and acceptance of the documents defined in as being required for the detailed engineering design freeze – Vendor Document Submittal Schedule.

(3) The *Contractor* identifies any discrepancies that would lead to shortcomings in the Contractor and makes the *Employer* aware of such discrepancies and provides recommendations, where applicable. The *Contractor* takes action on such discrepancies.

Installation

(1) This stage consists of the installation, on-site inspection and testing of all equipment forming part of the *works* as well as other items that the *Employer* has specified such as free issued items.

(2) Erection and installation of the relevant equipment does not begin until:

i. The detailed engineering documentation for the section of the plant concerned has been accepted by the *Project Manager,*

ii. The FAT is successfully passed and accepted by the *Project Manager.*

(3) Quality inspections and tests are carried out by the *Contractor* after erection to prove the compliance of the installation with the Works Information and the detailed engineering design

freeze documentation.

(4) Erection and installation are only considered complete once the quality inspections and tests for the installation concerned have been accepted by the *Project Manager*

(5) The first type of any erection and installation activity is accepted by the *Project Manager* before any repeat installations of this type of erection and installation activity.

(6) The first type of any erection and installation activity is used as reference – in conjunction with this Works Information and the detailed engineering design freeze documentation – upon which the quality and completeness of all repeat installations are evaluated by the *Project Manager*

(7) The *Project Manager* reserves the right to appoint representatives to inspect all parts during erection and to be present at any of the quality inspections and tests

(8) The *Project Manager* is free to specify hold and witness points during the installation and testing stages of the project.

(9) The *Contractor* gives fifteen working days advance notice to the *Project Manager* of holds and witness points.

(10) The *Contractor* confirms hold and witness points at least seven working days prior to the test activity.

Commissioning

(1) Commissioning is defined as bringing into service all items of the works and meeting the functional requirements and performance criteria of the Works Information.

(2) Commissioning includes all testing and verification of the stated performance criteria with:

i. Works Information.

ii. The detailed engineering design freeze documentation

(3) The *Contractor* co-operates fully with the *Project Manager* or Representative(s) in the commissioning of plant sections for which the *Employer* supplies equipment specified.

(4) The *Contractor* provides all the test equipment for the commissioning of the individual modules and the sub-assemblies of the reverse rotation system.

(5) The *Contractor* certifies that equipment is in a suitable and safe condition for use before it is placed in service,

Start-up procedures required to put the *works* into operation

(1) The *Employer* ensures that all interfaced and related systems are reliable and available prior to the *Works* being commissioned. Take over procedures.

(1) The *Contractor* supplies personnel to commission the *works*.

(2) Take-over would be done after commissioning without defects.

"As Built" Documentation Package

(1) 'As Built' documentation is supplied by the *Contractor* to the *Project Manager* upon completions of *works*.

(2) The documents are reviewed by the *Project Manager* for correctness and conformance to the accepted design.

Plant Codification

(1) Codification and labelling of all equipment and documentation supplied as part of the Works is the responsibility of the *Contractor*.

(2) The *Contractor* uses the KKS codification system for all cables, instruments and on the additional junction boxes.

(3) The coding is done in line with 240-109607736 (Eskom KKS Key Part Standard) and ENG/GEN/04 (Majuba PS Plant coding and labelling standard).

As-Built Drawings, Operating Manuals and Maintenance Schedules

(1) All documentation is supplied in both electronic and hardcopy (paper) format. The *Contractor* submits three (3) hard copies of the manuals and three (3) soft copies of the manuals on a CD-ROM.

(2) The *Contractor* supplies documents as per the VDSS (374-MAJ-AABB-D00139-89).

(3) All documentation, including reports, manuals, etc. is in the English language.

(4) Technical manuals include all technical data as well as the technical data and leaflets of each individual component used provided. Where generic manuals are provided, an addendum is provided indicating the applicable project specific components.

(5) Manuals are of a good quality and cover the following as a minimum:

i. Technical descriptions of the equipment and component parts
ii. General arrangement drawings
iii. Installation instructions with drawings or pictures
iv. Operating and maintenance instructions for all components
v. Detailed parts lists (accompanied by exploded view type drawings clearly detailing the part and uniquely identifying it)
vi. Spare part ordering instructions

(6) Any special instructions pertaining to storage of spare parts, or their shelf life is included

in the maintenance manual.

(7) All drawings requested for component location, dismantling and re-assembly for maintenance are included in the maintenance manual.

(8) All special tools required for operating and maintenance of the equipment are presented in a form of a schedule in the operating and maintenance manual, respectively.

(9) The *Contractor* updates all documentation which is impacted by the project

i. Drawing Requirements

(1) The *Contractor* supplies reproducible drawings according to the Vendor Document Submittal Schedule (VDSS).

(2) All drawings are submitted in both pdf and MicroStation CAD formats.

ii. Maintenance Manual

(1) The *Contractor* provides maintenance manuals.

(2) The manuals are complete with:

i. Power station name and order number

ii. List of reference drawings

iii. Details of all components

(3) The manuals are submitted in loose-leaf binders to ISO format and normally A4 size. The use of oversize pages is kept to a minimum and does not exceed page height unfolded. Fixings are preferably 'D' ring and are of the snap close type. Post binders or other fixings are not acceptable. Binders do not exceed 80 mm in overall thickness. The document identity appears on both the front cover and on the spine.

(4) The manuals are provided by the original equipment manufacturer detailing descriptions of operating and the maintenance work. The procedure covers the requirements for maintenance of the equipment over the design life.

iii. Maintenance Schedule

(1) The *Contractor* submits a detailed maintenance plan that defines the extent and frequency of maintenance and inspections.

(2) The *Contractor* provides a maintenance strategy for the life expectancy of the new reverse rotation system with a summary schedule. The *Contractor* provides the life expectancy of the equipment. The *Contractor* lists maintenance spares (with detailed specifications) for the life expectancy of the equipment.

(3) The system is to successfully pass all test conditions prior to the *Project Manager* accepting

the testing results.

4. SPECIFICATIONS FOR THE WORKS

4.1 Applicable national standards

The *Contractor* is required to adhere to the latest editions of and the normative references within the following SANS standards and other codes of practice, regulations, and standards:

Code	Description
240-10565800	Eskom Supplier Quality Management: Specification.
ISO 9001:2015	Quality Management System
240-57127951	Standard for the Execution of site investigations
240-57127953	Execution of Site Preparation and earthworks
240-85549846	Standard for Design of Drainage and Sewerage Infrastructure
SANS 10111 Series	Engineering drawings
SANS 10120	Code of Practice for use with other SANS specifications
TMH and TRH Series	Technical Manuals of Highways and Technical Recommendations of Highways Series
AASHTO	American Associates of State Highways and Transport Officials
(OHASA) 85	Occupational Health and Safety act
ESK AM AAA 1	Eskom Corporate Identity Manual
240-53114186	Document and Record Management Procedure
SANS 2001 Series	Construction Works
SANS 36-681	Generation Plant Safety Regulations
SANS 1200	Standardized specification for civil engineering construction
240-84418186	Roads Specification Manual
SANS 1350	Guardrails for roads (W-section)
SANS 1921-1-2004	Part 1: General Project Management and construction works
SANS 1921-2-2004	Part 2: Accommodation of traffic on public roads occupied by the contractor

5. ACCEPTANCE

This document has been seen and accepted by:

Name & Surname	Designation
Riaan Venter	Chief Civil Engineer: Roads and Rail
Mpumelelo Mnisi	Civil Engineer Auxiliary Engineering
Muawiya Pilodia	Civil Engineer Auxiliary Engineering
Mthobisi Shongwe	Engineer in Training Civil: Auxiliary Engineering
Sinothi Buthelezi	Auxiliary Engineering Line manager

6. REVISIONS

Date	Rev.	Compiler	Remarks
February 2025	1	Mpumelelo Mnisi	First Issued for Approval/Signatory

7. Development Team

The following people were involved in the development of this document:

- Mpumelelo Mnisi
- Mthobisi Shongwe
- Riaan Venter

8. Acknowledgements

Not applicable.