



Scope of Work – Substation Engineering

Technology

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Bighorn

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1. INTRODUCTIONS

The existing outer security fence at Bighorn Substation has been breached on a number of occasions. This has resulted in theft of infrastructure within the substation yards. In order to prevent or delay any further breaches of the fence, a new outer security fence with improved features will be installed. This document covers the construction work that will be done at Bighorn Substation.

2. REFERENCES

- [1] (240-55922824) - Substation Layout Design Guideline
- [2] (240-109644476) - Standard for Implementation of Substation Layouts for Transmission Substations
- [3] South African Grid Code
- [4] Occupational Health and Safety Act (OHS Act) 85 of 1993
- [5] (32-1205) - Eskom Maintenance Management Policy
- [6] (TST41-794) - Substation and Facility Maintenance
- [7] (32-727) - Eskom Safety, Health, Environment and Quality policy
- [8] (SANS 1200) – General Civil
- [9] (240-1001183119) - Standard for Fences in Eskom Transmission Stations
- [10] (240-108982466) - Standard for HV Yard Stone in Eskom Substations
- [11] (TST41-877) - Transmission Substations Design Earthing Standard
- [12] (240-139282493) – Security Lighting for Eskom applications
- [13] (240-75883230) – Refurbishment of Steel Power Lines Structures Standard
- [14] (240-78980848) – Non-lethal Fence Specification

3. SCOPE OF WORK

Designs and construction are in accordance with [1] – [21]. All construction is to be carried out in accordance with Eskom's Safety, Health and Environmental Specification. Construction will be done in close proximity to other electrical equipment; therefore, all necessary safety procedures must be strictly adhered to.

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The Civil Scope of Work involves the following design aspects:

- Outer Security fence.
- Installation of access gate.
- Evaluate and review existing drainage.
- Installation of stone verge

3.1 OUTER FENCE

- The new outer fence will be constructed according to 240-76368574-rev 2. This document should be referenced in conjunction with the relevant drawings.
- The outer fence shall be constructed according to the layout shown on BIG19P07-SE-E11

3.2 ACCESS GATES

- The access gates must be removed completely and spoiled.
- A new access gate according to drawing 0.54/7470 sht. 1 to 11 must be installed complete with gate motors, gates, and sleeves.

3.3 DRAINAGE

- Evaluate and review the existing drainage and mitigate any deficiencies that are affecting the effectiveness.

3.4 STONE VERGE

- Clear vegetation to in the affected area as shown on 0.54/393
- Level and compact in-situ
- Place weedkiller
- Place yard stone as specified on 0.54/393

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
Andile Maneli	Middle Manager – Civil

5. REVISIONS

Date	Rev.	Compiler/s	Remarks
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6. DEVELOPMENTAL TEAM

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

Azhar Mayet

7. ACKNOWLEDGEMENTS

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