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FACULTY OF INDUSTRIAL TECHNOLOGY
DEPART OF CIVIL AND WATER ENGINEERING

FINAL YEAR PROJECT REPORT

Submitted by

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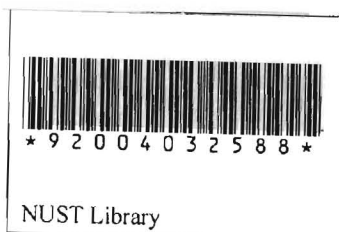
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DUALISATION OF THE JOSHUA MQABUKO NKOMO AIRPORT ACCESS ROAD

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DEPARTMENT CIVIL AND WATER ENGINEERING

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ABSTRACT

This project entails the dualisation of a 4.4km access road linking the Joshua Mqabuko Nkomo Airport to the Bulawayo/Nkayi main road. Design standards have been used for design purposes throughout the project. *which ones*

The student designed the 4.4 km road using the Ministry of Transport and Communication (MOT) method of design. This method was specifically designed to meet the Zimbabwean conditions. Other methods that had been used previously were stemmed from technology and research carried out in the US and Europe over 40 yrs ago. These have proved to be unreliable since they were conceived in a very different environment in terms of climate, traffic, road users and material. *what makes you say this do you have evidence?*

As part of the design the student looked at:

- Survey drawings
- Horizontal alignment involving superelevation, curve widening, circular curves, design speed, curve radii.
- Soil survey and tests.
- Traffic survey
- Vertical alignment involving gradients, longitudinal profile, crosssection, sight distance and K factors for calculating lengths of vertical curves.
- Drainage system involving road drainage requirements, surface drainage, and culvert design.
- Computer generated design using Civil Designer.
- Roundabout modification to suit the dualised road.
- Disadvantages of road construction