Enforcement against overloaded trucks in South Africa: Case Study

TC1.4 Session

September 2007

Alex van Niekerk

South African National Roads Agency Ltd.

Co-authors: Johann Anderson & Ferdi Boshoff

CONTENTS

1. Problem Statement
2. Utilising Technology for overload control
3. N4 Corridor
4. Project Summary
5. Photographs

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

PROBLEM STATEMENT

- SA Road Network
  - → 300 000 km of primary, secondary & tertiary roads
  - → Replacement cost of R200 billion
- Road network investment has to be protected and cost-effectively managed through:
  - → Vehicle roadworthiness
  - → Adherence to traffic regulations (including overloading)
- Establishment of Traffic Control Centres (TCC's):
  - → Roadworthiness
  - → Overload control
  - → Corridor strategy

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

PAVEMENT DAMAGE DUE TO OVERLOADING

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

Utilising Technology For Corridor Overload Control

- Overloaded vehicles divert to alternative routes – therefore not weighed, damaging alternative routes
- Previous strategy – provide weigh stations on alternative routes, however, high capital & operational costs
- Alternative strategy – have centralised weigh station with satellite low speed weigh in motion (LSWIM) stations

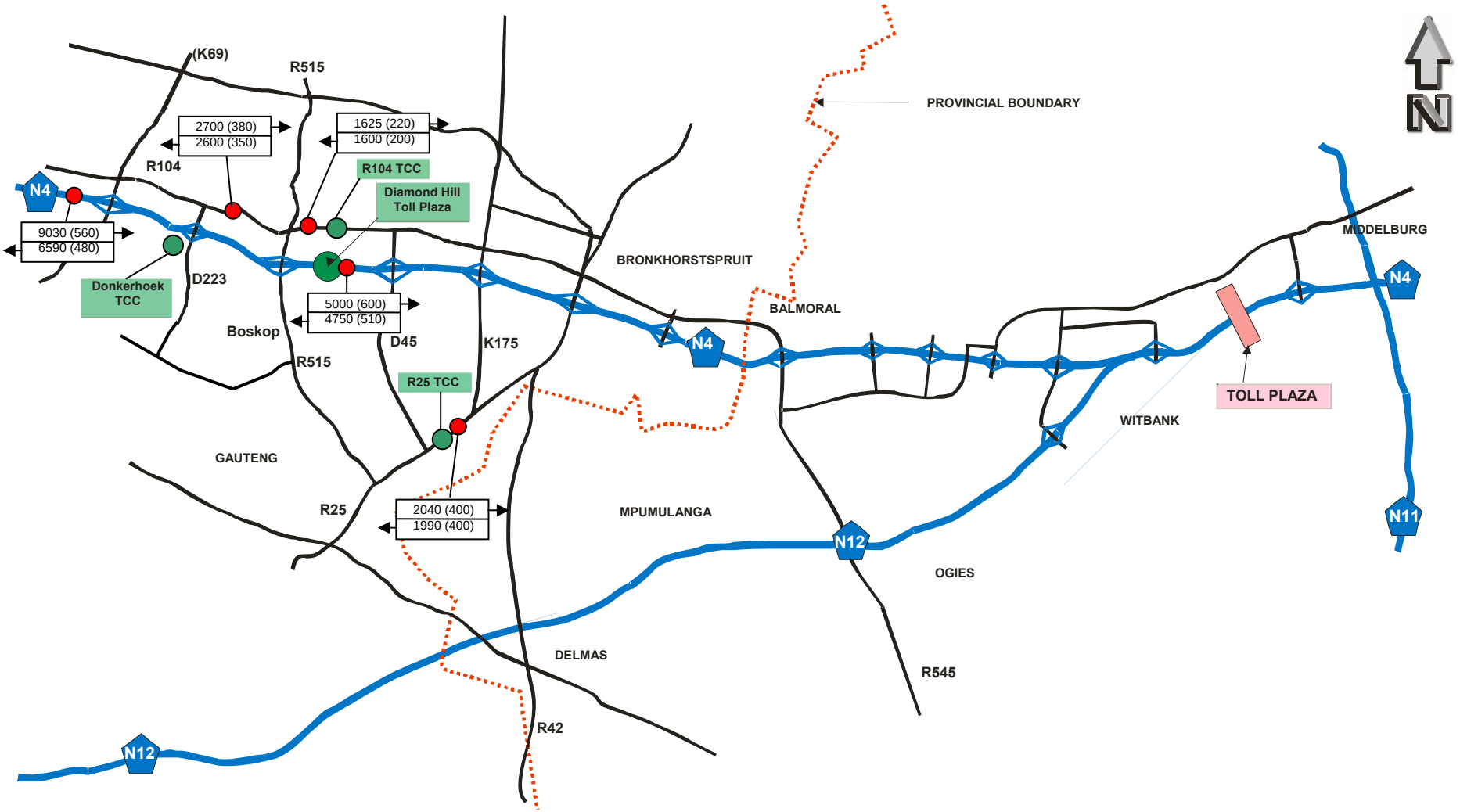
THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

Utilising Technology For Corridor Overload Control

- Utilise toll plaza lanes for LSWIM installations (lane discipline/flat terrain)
- Identify potentially overloaded vehicles – place tracking device on vehicle – monitor to centralised weigh station
- Minimise human interference through electronic control, monitoring & auditing

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

N4 Corridor



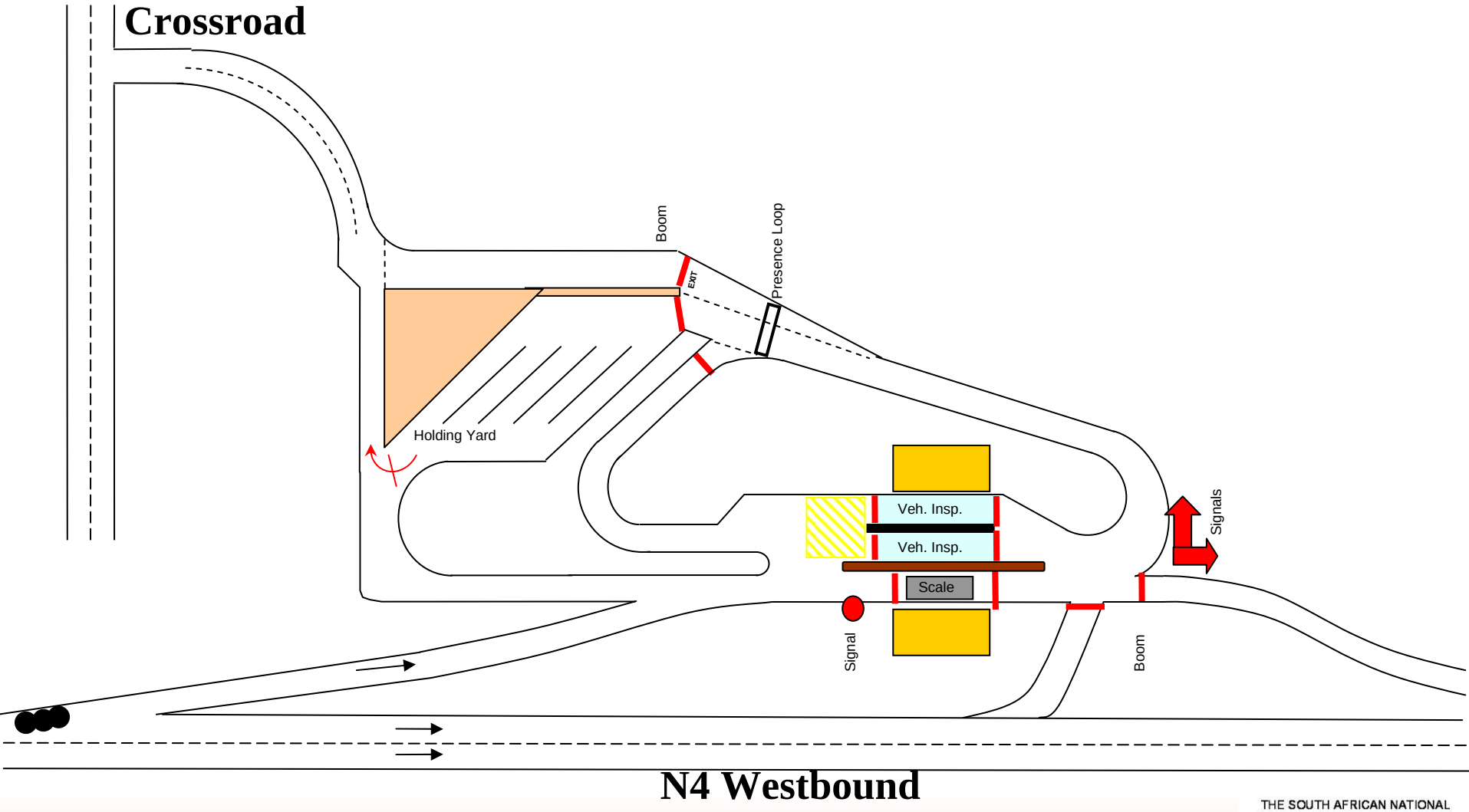
Traffic Volumes

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

DONKERHOEK TRAFFIC CONTROL CENTRE

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

DONKERHOEK OPERATIONS



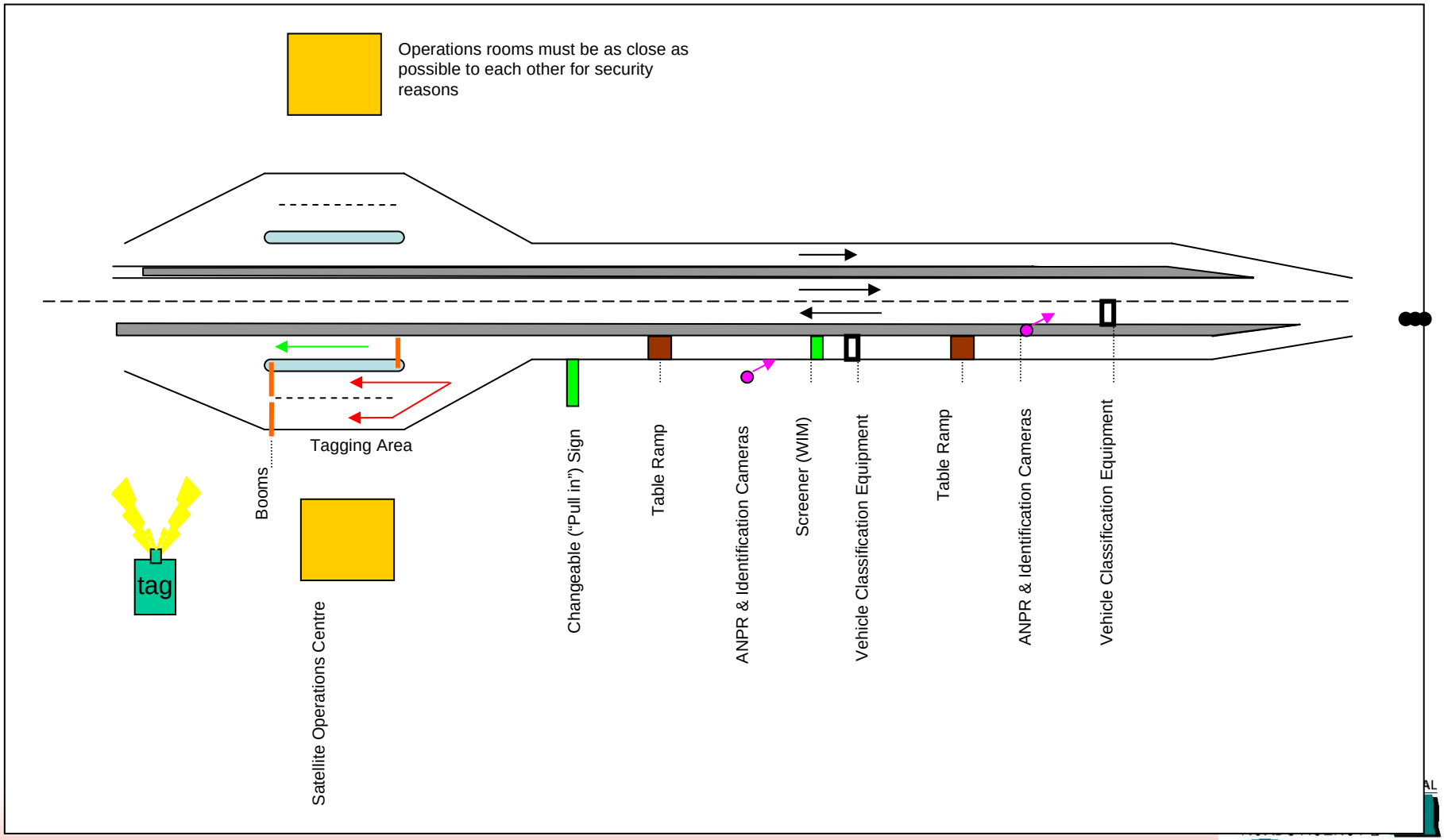
THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

DONKERHOEK TRAFFIC CONTROL CENTRE

WITFONTEIN / RAYTON SATELLITE STATION

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

WITFONTEIN / RAYTON OPERATIONS

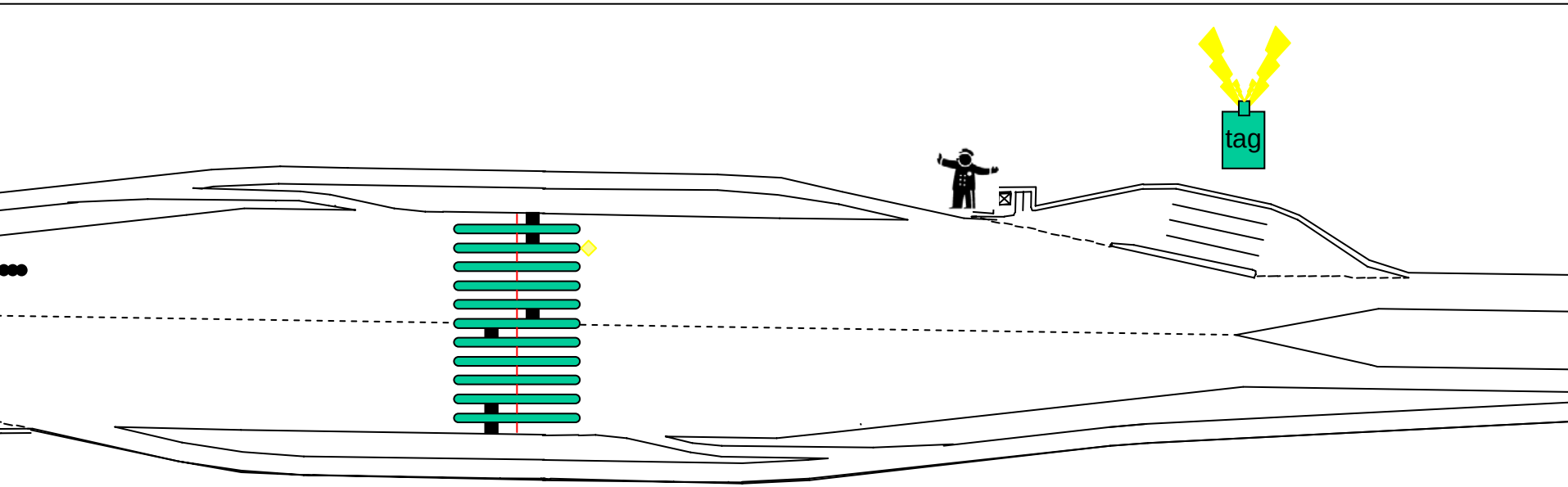


WITFONTEIN / RAYTON SATELLITE STATION

DIAMOND HILL SATELLITE STATION

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

DIAMOND HILL OPERATIONS



THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD

DIAMOND HILL SATELLITE STATION

THANK YOU

THE SOUTH AFRICAN NATIONAL ROADS AGENCY LTD