Petone to Terrace Tunnel
Advanced Traffic Management System (ATMS)

Tim Siau, Network Engineer, NZTA
The project site is approximately 11km long

Situated on SH2 and SH1 between Petone and Terrace Tunnel

Total Cost, $13.9M

AADT >80,000 VPD at Ngauranga Interchange
State Highway between Petone and Terrace Tunnel experience’s congestion, often from:

- Demand exceeding capacity
- Planned events
- On-ramp merging
- Unplanned traffic incidents
Background

- Effects of congestion to the network: -
  - Delays
  - Increases driver stress and frustration
  - Increases operating vehicle costs
Background


- Benefits from the initial ATMS include:
  - Improved incident response times.
  - Inform drivers of real-time traffic conditions.
Scope of the project

- To install the following devices: -
  - Closed Circuit Television (CCTV) Camera
  - Variable Message Signs (VMS)
Scope of the project

- Variable Mandatory Speed Signs (VMSS)
- Lane control signals
- Physical barrier
- Automated incident detection device
The infrastructure to support the field devices includes:
- Trenching
- Ducting
- Fixing cable ladders on structures
- Installation of fibre optic and power cables
- Installation of cabinets and junction boxes
- Gantries
- Camera poles/fixings
Goals of the ATMS equipment were to:

- Manage the traffic flow
- Identify the problems on the highway rapidly
- Alert road users with real-time information
- Match the traffic speed to conditions
- Provide a sustainable asset
Project Delivery

- Project split into two phases
- Tight project delivery date
- Works for the First Phase includes:
  - Installation of CCTV cameras between Ngauranga and Terrace Tunnel
  - Infrastructure to support CCTV cameras and future devices between Ngauranga and Terrace Tunnel
Project Delivery

- Works for the Second Phase includes Installation of:
  - CCTV cameras between Petone and Ngauranga
  - VMS
  - VMSS
  - Lane Control Signals
  - Physical barriers
  - Automated incident detection devices
  - Infrastructure
Results

- Phase 1 has been completed
- Phase 2 is currently out for tender
- There is CCTV coverage between Ngauranga and Terrace Tunnel
- NZTA is able to monitor this section of State Highway closely
Results - recent use of the ATMS:
Truck Protests 4th July 2008

- Truck Drivers protest
- NZTA were able to track the progress of the convoy
- Distributed real-time information out to various organisations including the media
- Alerted road users as to the real time traffic delays
Agreement between NZTA and Wellington City Council to manage traffic cooperatively

Future plans will be to:

- coordinate NZTA and Wellington City Council traffic management systems
- find a location where the traffic management system will be held
Thank you