

# Crown Range Zig Zags Upgrade – Linking Communities and Keeping our Tourists Safe in an Alpine Environment



# Summary of Presentation

- Introduction
- Design Aspects
- Construction Phase
- Outcomes and Key Benefits
- Conclusions

# Introduction

- 2.8km long
- 260m Elevation Gain
- Average 5.0m seal (4.0m in places)
- 1150 AADT



Location Plan of Zig Zags

# Introduction

- Existing Issues
  - Poor Alignment
  - Steep drop offs
  - Narrow Width
  - Accident History
  - Driver Frustration
- Undesirable route



# Introduction

- Objectives:-
  - To improve the safety and level of service of the road
  - To complete the work in keeping with the outstanding natural beauty of the area

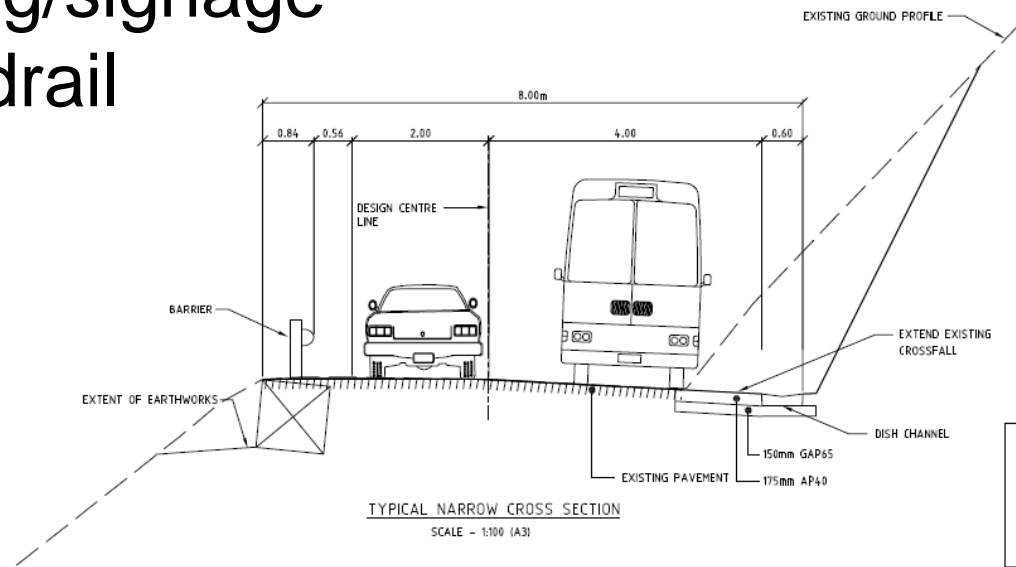


# Design Aspects

- Strategy Study August 2003
- PFR November 2005
  - Widen seal to target 6.0m
  - Upgrade/widen hairpins to 15kph design speed and allow buses to negotiate in single movement
  - Install suitable guardrail
- SAR February 2007

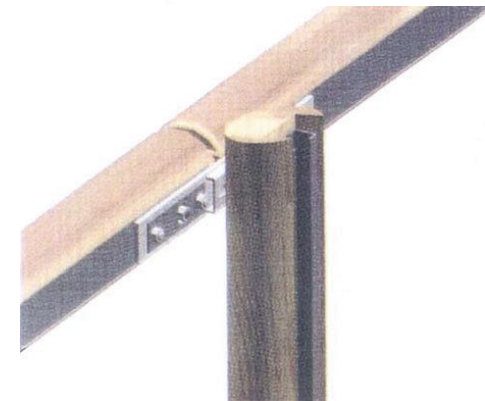
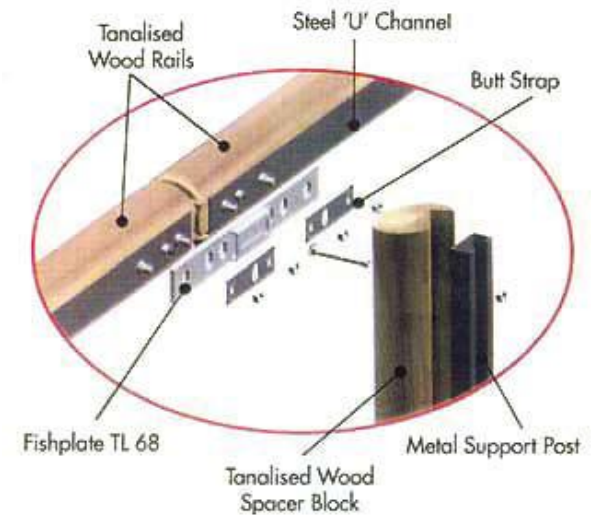
# Design Aspects

- Key Aspects
  - Widening with Earthworks/Retaining Walls
  - Pavement Construction & Drainage
  - Pavement marking/signage
  - Appropriate guardrail



# Design Aspects

- Guardrail
  - Timber faced rail
  - First large scale use in NZ
  - Imported from France
  - Tested to European N2
  - Environmentally appealing
  - Easy to install and replace
  - Allow variable post positioning





# Design Aspects



# Construction Phase

- Interactive Tender Process
- Construction completed February to July 2008
- Methodology
  - disposal of waste material
  - separate work zones
  - truck movements
  - tubular edge marker posts



# Construction Phase



# Project Outcomes and Key Benefits

- Safety Improvements
  - Widening has reduced risk of head on collisions
  - Visibility improved
  - Widened corners provide for safer manoeuvres
  - Guardrail protection
  - Improved driver perception



# Project Outcomes and Key Benefits

- Accident Savings
- Reduced Severity



# Project Outcomes and Key Benefits



# Project Outcomes and Key Benefits

- Quality of Life for Communities
- Environmental



# Project Outcomes and Key Benefits

- Contribution to National Economy
- Collaboration between key parties
- Clients Assessment





# Summary and Conclusions

- Successful project in Challenging Environment
- Substantial safety improvements
- Protection of environment and limited visual impact key to success
- Significantly improved accessibility
- Improved quality of life for residents and tourists



# Questions?

