

**Transmission  
Gully Project**

A NZ Transport Agency PPP Project



# Transmission Gully

**Presentation to Wellington U3A**

**Craig Nicholson, Principal Project Manager**



# Historic Investigations

**1919**

## **First known reference**

- Interest by local MP reported in Evening Post newspaper

**1940's**

## **U.S. Marines stationed at Paekakariki**

- Persistent “urban myth” about offer to build Transmission Gully

**1980's**

## **MoW/WRC “GATS” Study**

- Desktop study – concept route design & cost estimate

**1995–96**

## **Designation Process**

- Designation established, but resource consents not sought

**2004–06**

## **Western Corridor Transportation Study**

- Compared alternative strategies (across all travel modes)
- Consultation showed strong public preference for TG
- Western Corridor Plan adopted by RLTC, GWRC & Transit NZ

# Project Development

**2006–08**

## **Detailed Investigations & Scheme Assessment**

- Compared options and determined “Preferred Alignment”

**2009–11**

## **Preparation of Consent Applications**

- Detailed assessment of environmental effects

**2011–12**

## **Board of Inquiry Process**

- Hearing of technical evidence and public submissions

**2012–14**

## **PPP Contract Procurement**

- PPP proposals sought, evaluated and negotiated

**July 2014**

## **PPP Contract Let**

- Design & Construction phase commenced
- Motorway due to open in 2020



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## The Route



TRANSMISSION GULLY ROUTE



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## The Route



# Key Features

## PROJECT SCOPE

- Mackays Crossing to Linden (28km) plus associated link roads
- Minimum of two lanes in each direction
- Extra “crawler lane” on steep uphill sections
- “Motorway” design standards
  - Interchanges rather than intersections
  - 110 km/h design speed
  - 3.0m shoulders
  - Full length median barrier and side protection barriers

# The Challenges

## MAJOR CONSTRUCTION CHALLENGES

- Scale of the project:
  - Earthworks ~ 10 M m<sup>3</sup> cut and fill
  - Cut heights up to ~ 70 m
  - Significant lengths of reinforced soil embankments (~ 4 km), up to 40 - 50 m high
  - 27 bridges and major culverts
    - Takapu Bridge 230m long, ~ 60m high
- Access constraints
- Impact on other Infrastructure:
  - Transpower, First Gas, Wellington Water, Wellington Electricity



# Transmission Gully Project

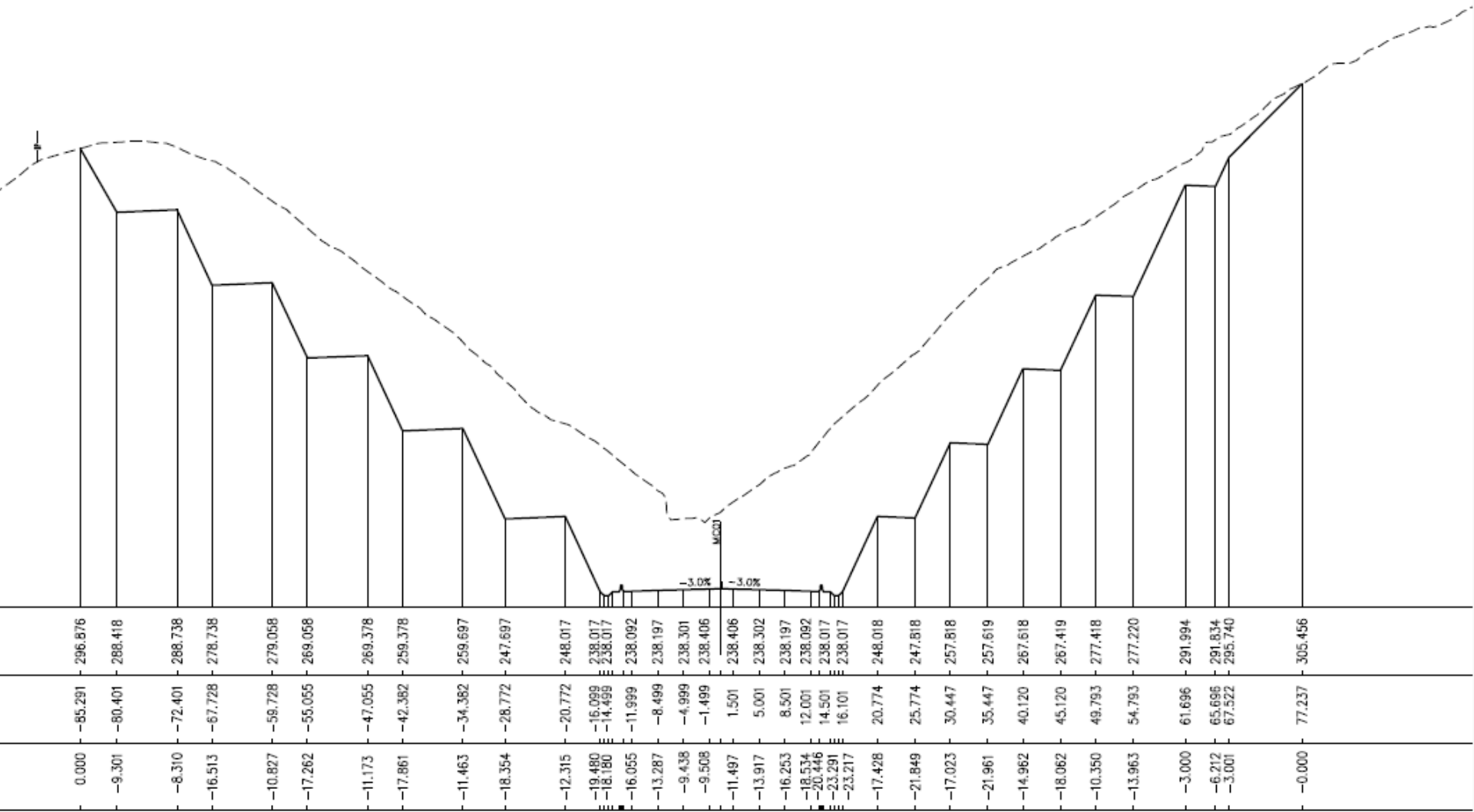
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# Wainui Saddle Cut



## Wainui Saddle Cut





# Public-Private Partnership (PPP)





# NZ PPP Model

## TREASURY'S PPP DEFINITION

“A **long term contract** for the delivery of a service, where the provision of the service requires the **construction of a new asset**, or the enhancement of an existing asset, that is **privately financed** on a **non-recourse basis**, and for which **full legal ownership is retained by the Crown.**”



# Transport Agency's PPP Model

## PPP MODEL PHILOSOPHY

- Long term contract (30+ years) to design, construct, finance, maintain and operate the project.
- Transfer design, construction and operational risk to PPP consortium, which is incentivised to bring innovative and efficient approaches, including “whole of life” asset management.
- Pay quarterly Unitary Charge for 25–years following road opening, based on road availability and performance.

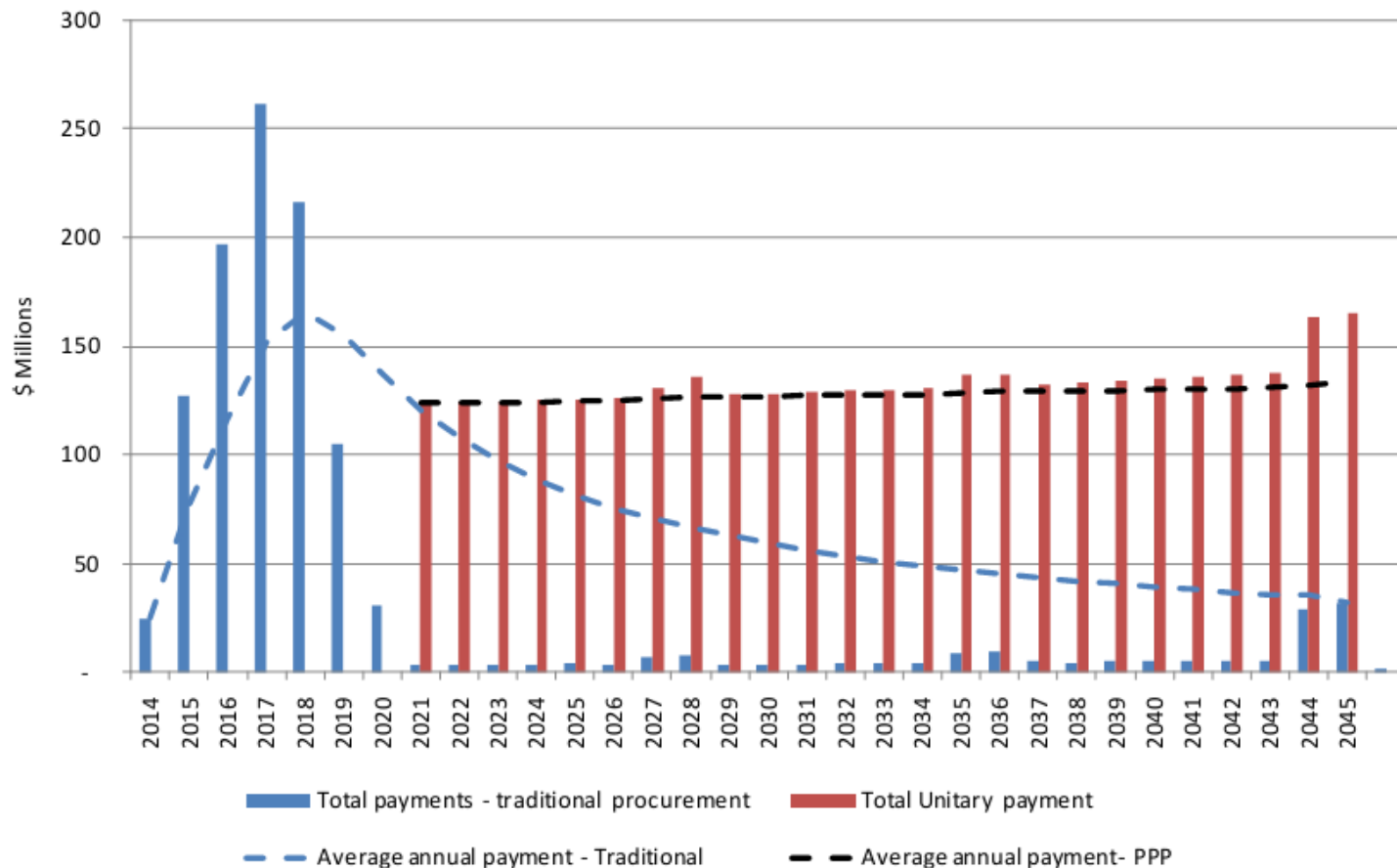
# Transport Agency's PPP Model

## PPP MODEL OUTCOMES

- PPP model structured to achieve full road availability and delivery of four project outcomes:
  - Safer journeys
  - Reduced travel time;
  - Improved travel time reliability and resilience; and
  - Satisfied customers.



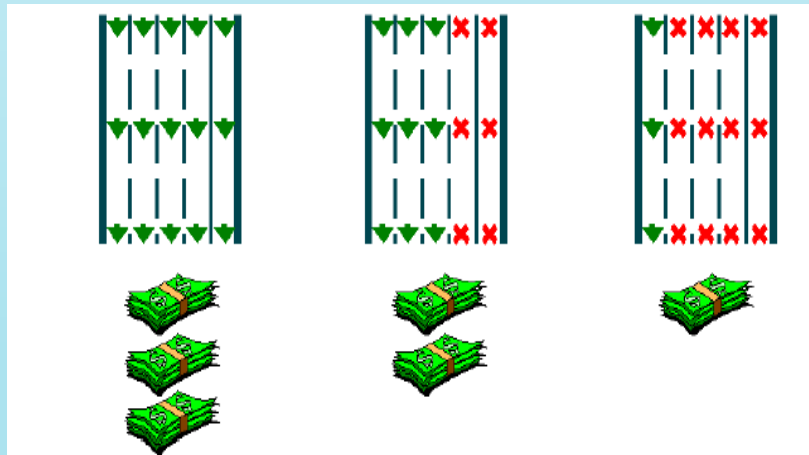
## Payment Profile: Traditional vs PPP



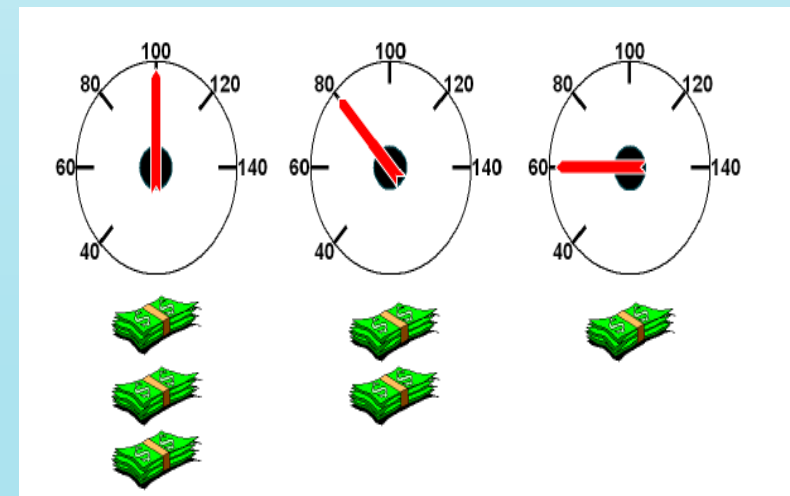
## Model Form: Traditional vs PPP

Abatements of quarterly unitary payment for any reduction in either road availability or required performance levels.

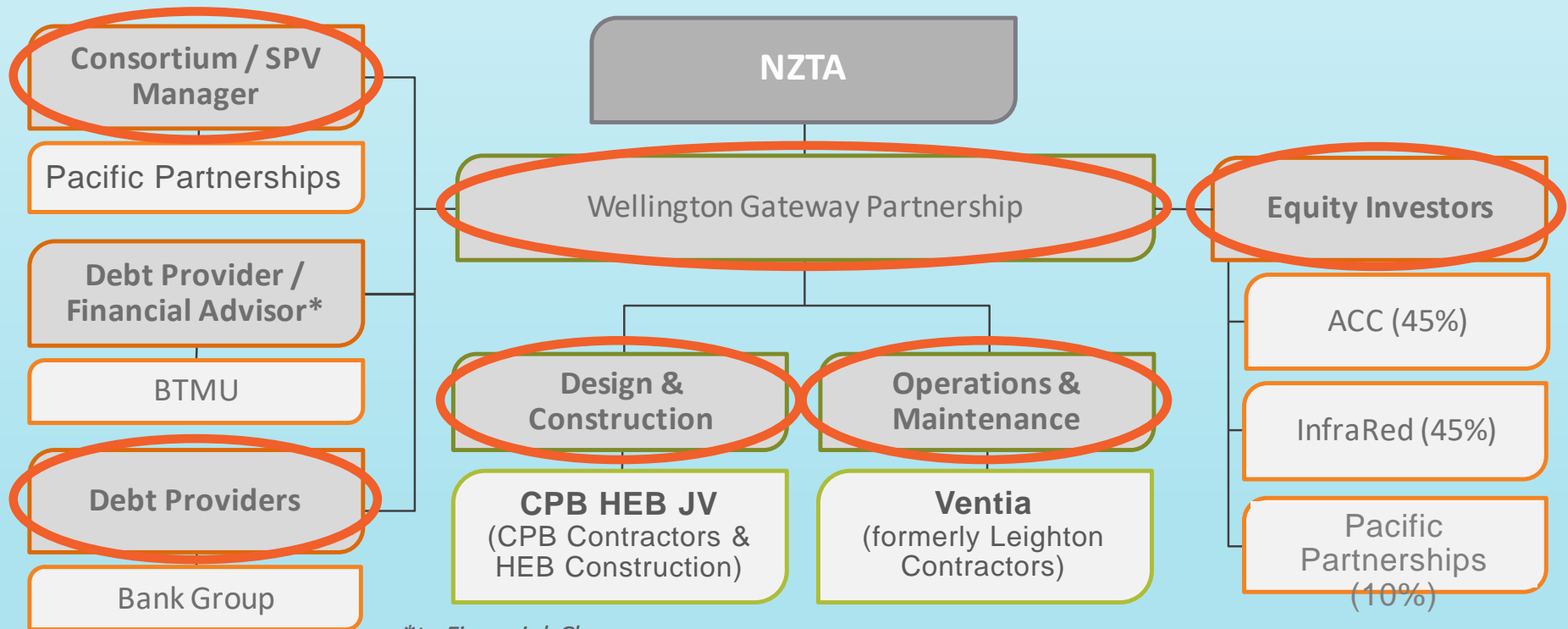
### Availability



### Average Speed



# Wellington Gateway Partnership



*\*to Financial Close*



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## Progress To Date





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## Paekākāriki



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## Paekākāriki





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## Paekākāriki





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## Te Puka Valley





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## Wainui Saddle





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## Wainui Saddle





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## Horokiri Valley





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## Horokiri Valley





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# Horokiri Valley





# Battle Hill Access Underpass





# Battle Hill Access Underpass





# Battle Hill Access Underpass





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## SH58 Interchange





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## SH58 Interchange



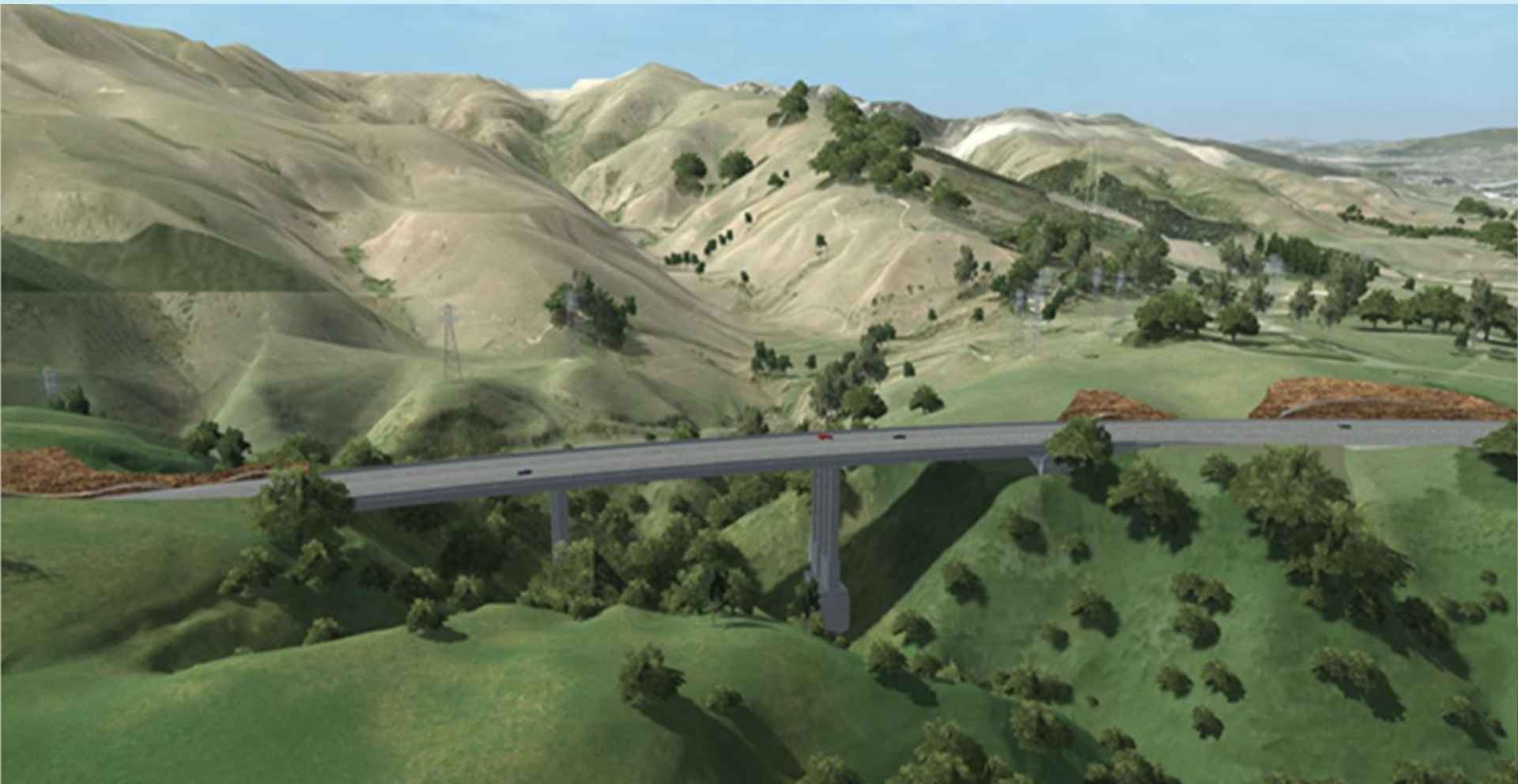


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# Takapu Bridge





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## Takapu Bridge





# Kenepuru Link Road and SH1 Southern Connection





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## Kenepuru Link Road





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# TG Northbound Bridge





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# TG Northbound Bridge





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# TG Northbound Bridge





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# Collins Avenue Bridge





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# Collins Avenue Bridge





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# Collins Avenue Bridge





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## Any Questions?

FOR MORE INFORMATION SEE:

[www.tg.co.nz](http://www.tg.co.nz)

FOR PHOTOS AND VIDEOS SEE:

[www.nzta.govt.nz/projects/wellington-northern-corridor/transmission-gully-motorway/images-and-videos/](http://www.nzta.govt.nz/projects/wellington-northern-corridor/transmission-gully-motorway/images-and-videos/)

<https://youtu.be/DOHlzuFfesU>

[https://youtu.be/Y0GExH\\_E47s](https://youtu.be/Y0GExH_E47s)

<https://youtu.be/yaXtlmtYU8Y>

