





Sharing of the railway corridor with State Highway 2

Department	Engineering
Author & contact officer	Jamie Cox – Engineering Manager
1. Purpose	1.1 The purpose of this report is to seek Council's endorsement of a proposal to reduce travel time on State Highway 2 from Wairoa to Napier.
Recommendation	<p><i>The Engineering Manager RECOMMENDS that:</i></p> <ol style="list-style-type: none">1. Council offers its support in principal on the proposal for the sharing of the railway corridor with State Highway 2 between Wairoa and Napier, specifically from Esk Valley to Waikare, to reduce travel time on SH2 between Wairoa and Napier.
2. Background	<p>2.1 The Wairoa District Council has had a number of presentations from Mr Rex McIntyre and co. regarding a proposal to utilise parts of the railway corridor on State Highway 2 between Wairoa and Napier for the purposes of reducing travel time between Wairoa and Napier.</p> <p>2.2 Mr Rex McIntyre has advocated the benefits of sharing the railway corridor with State Highway 2 and seeks Council's endorsement of the proposal.</p> <p>2.3 At the November Council Forum, Council offered its support in principal and that this support, by way of resolution be tabled at the next meeting of HBRC Transport Committee.</p>
Confirmation of statutory compliance	<p>In accordance with section 76 of the Local Government Act 2002, this report is approved as:</p> <ol style="list-style-type: none">a. containing sufficient information about the options and their benefits and costs, bearing in mind the significance of the decisions; and,b. is based on adequate knowledge about, and adequate consideration of, the views and preferences of affected and interested parties bearing in mind the significance of the decision.
Signatories	Author: J Cox  Approved: F Power 

NAPIER - GISBORNE TRANSPORT DILEMMA

Proposal to the Regional Leaders

Supported By:

ROAD TRANSPORT
ASSOCIATION 

The railway line blowout has forced us to critically analyse the economics of the transport options for the East Coast. What appears to be a disaster, could well be the opportunity for a radical solution to help the Region in terms of tourism, economic growth and general prosperity.

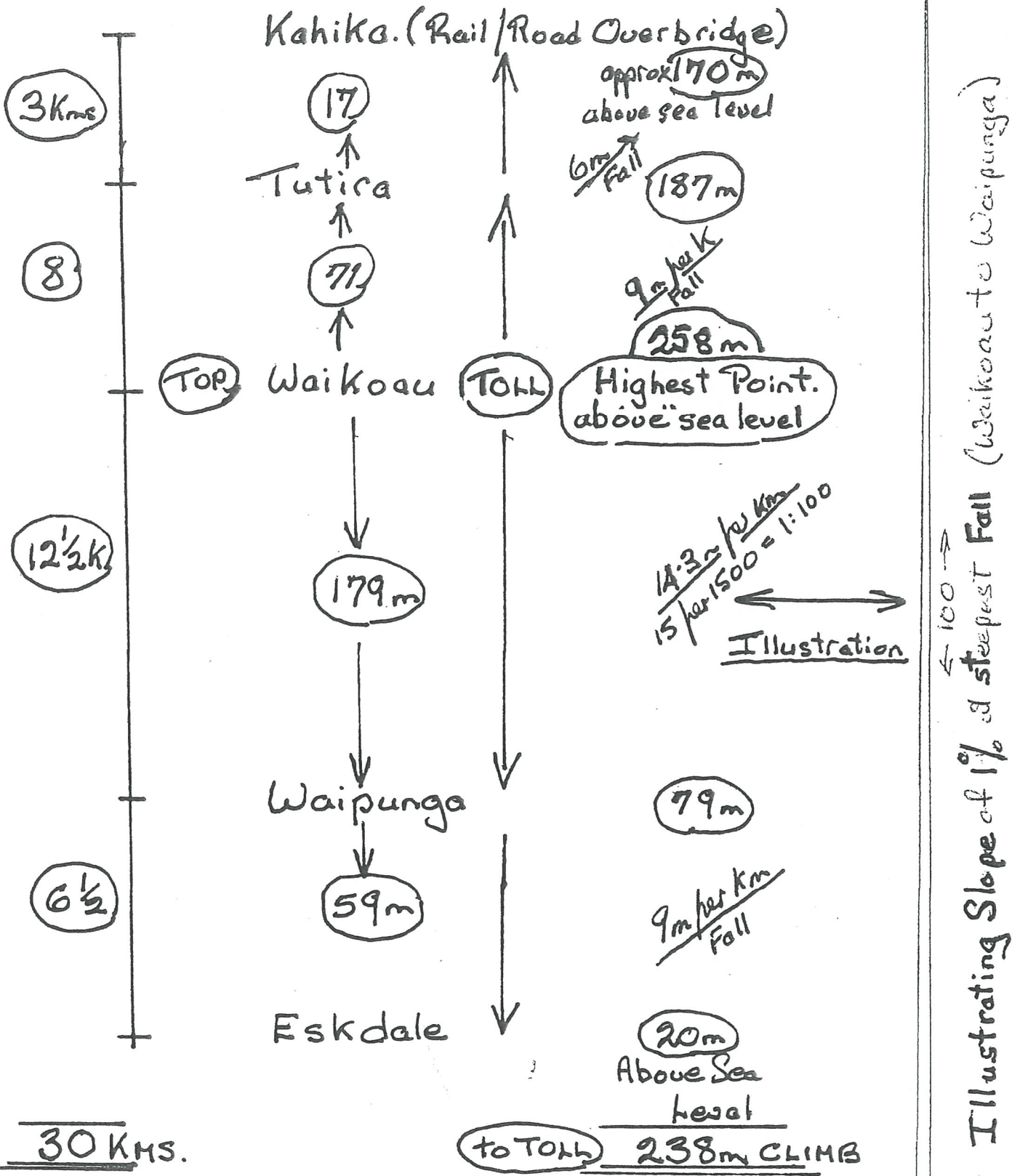
THE SITUATION

ISSUES FACING OUR EAST COAST COMMUNITIES:

- === Gisborne people and businesses are isolated. Population 2006-2013 declined by 4,743 (9.7%). (1.4% per annum)
- === Wairoa could be facing terminal economic decline if access does not improve. Population 1996-2013 declined by 2,187 (21.5%). (1.25% per annum) Therefore, Gisborne/Wairoa population has reduced by 6,930 people. This decline could continue if access to the region does not improve soon.
- === How can we improve the road?
- === How economical is the railway?
- === How can we promote growth, future prosperity and tourism for the East Coast?

ESK TO TUTIRA "SUNSHINE HIGHWAY" on RAIL CORRIDOR

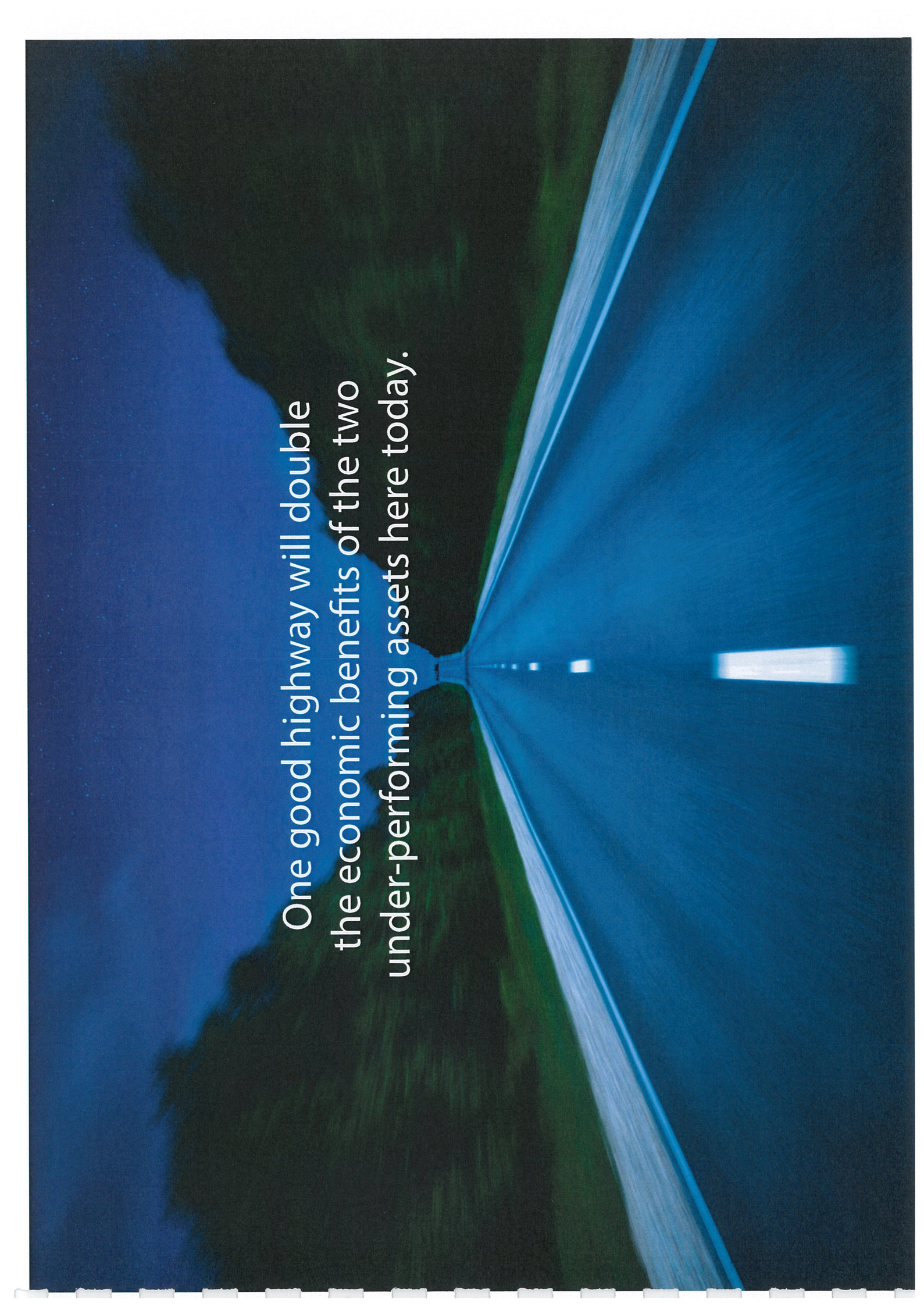
DISTANCES and HEIGHTS of PROPOSAL.



The Highest Point (To TOLL) Ave climb is 12.5m per 1500m all of which is below 1% per 100.

SOLUTIONS

- == CONVERT PARTS OF THE RAILWAY CORRIDOR FROM ESKDALE TO PUTORINO INTO A HIGHWAY OF HPMV63 ROAD STANDARD FROM HPMV50 AT PRESENT.
- == THE PRACTICALLY FLAT GRADE OF 1-100 THAT THE RAIL PROVIDES WILL GIVE A SUPERB HIGHWAY WITH EASY BENDS OF 100KPH AND NO HILLS. THE HIGHWAY TO TUTIRA WILL IN FACT BE BETTER THAN THE TAUPU M5 (8.5 METRES) TO TE POHUE AS IT WILL BE WIDER AT 10 METRES WITH NO HILLS OR BENDS. THIS IS THE ONLY ROUTE POSSIBLE TO WAIROA/GISBORNE THAT COULD EVER ACHIEVE THIS OUTSTANDING RESULT.
- == THE RAILWAY CORRIDOR COULD BE AVAILABLE FOR FUTURE SERVICES, INCLUDING GAS, FIBRE-OPTIC CABLE, ELECTRICITY AND FOR BIKE TRAILS AROUND NAPIER, WAIROA AND GISBORNE AREAS WHERE SUITABLE.
- == LEASE THE LINE FROM GISBORNE TO BEACH-LOOP
For railway enthusiasts and forestry usage.



One good highway will double
the economic benefits of the two
under-performing assets here today.

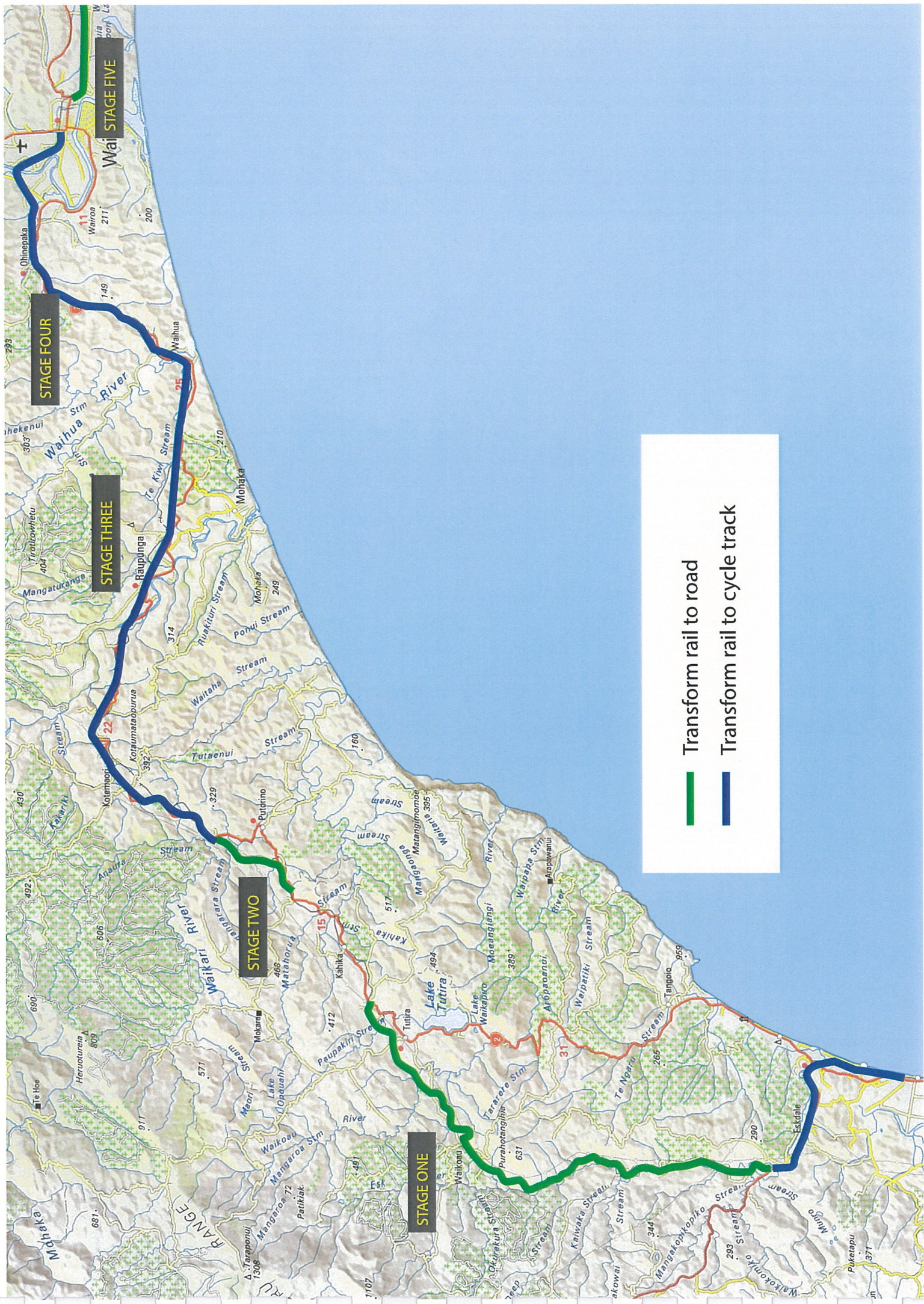
STAGE ONE

REPLACE THE RAILWAY LINE WITH HIGHWAY FROM ESK TO TUTIRA OVER-BRIDGE (APPROX 29KMS)

BUDGETED COSTS (based on estimates from experienced sources)*:

COSTS:			PLUS:	
29 kilometres of road @ \$800,000 per km	\$23.2M		Drainage (Culverts etc), fencing, side walls for	
3 x tunnels (2 x topped + 1 x over above)	\$1.8M		banks and retaining below, underpasses, side	
TOTAL ROADING (10m wide) \$862,000 per km	<u>\$25.0M</u>		rails, fencing, road signs	\$5.0M
Waikoau Viaduct 149m @ \$50,000 per metre	\$7.45M			
Abutments	\$1.350M		NZTA - PLANNING & TENDERING, contracts,	
Midway Tunnels Bridge 57m @ \$44,000 per metre	\$2.51M		administration, legal + leasing of corridor,	
Abutments	\$0.49M		Toll building at Waikoau at Holts Forest	\$5.0M
Esk River Bridge 64m @ \$40,000 per metre	\$2.56M		Allow overrun of 20% for unforeseen costs	\$10.0M
Approaches	\$0.64M		TOTAL EXTRA COSTS	<u>\$20.0M</u>
TOTAL THREE BRIDGES (Complete)	<u>\$15.0M</u>			
TOTAL	<u><u>\$40.0M</u></u>		TOTAL	<u><u>\$60.0M</u></u>

TOTAL BUDGETED COST OF PROJECT \$60.0 MILLION.



Transform rail to road

Transform rail to cycle track

STAGE TWO

REPLACE THE RAILWAY LINE WITH HIGHWAY AROUND THE PUTORINO AREA.

Reducing the length of highway from 7.95kms to 5.3kms.

BUDGETED COSTS:*	
Waikari Viaduct (186M) at \$50,000/metre	9.3M
Waikari Viaduct approaches	0.7M
Roading (3.8km) @ \$0.815M per km	3.1M
Unforeseen, drainage, fencing etc	0.7M
NZTA - PLANNING & TENDERING, contracts, administration, legal + leasing of corridor	1.2M
Allow overrun for unforeseen costs	2.0M
TOTAL	17.00M
TOTAL STAGE TWO	\$17.00M
TOTAL STAGE ONE	\$60.00M
STAGE ONE AND STAGE TWO TOTAL	\$77.00M

FOR STAGE ONE AND STAGE TWO TIME AND FUEL SAVINGS FOR ALL VEHICLES:*

TRUCKS

15 minutes @ \$200 per hour = \$50.00

7 litres Diesel @ \$1.25 = \$8.75

TOTAL SAVINGS (per truck) = \$58.75

Trucks = 420 per day (x 365 days = 153,300) x 58.75 = \$9,006M

CARS

12 minutes @ \$35 per hour = \$7.00

2.5 litres of petrol @ \$2.20 = \$5.50

TOTAL SAVINGS (per car) = \$12.50

Cars = 1280 per day (x 365 days = 467,200) x 12.50 = \$5,840M

COMBINED SAVINGS - ALL VEHICLES PER YEAR

TO NAPIER/WAIROA/GISBORNE REGION = \$14,846M

41 years for trucks to pay for road at \$77M will reward = **\$0.6 Billion**

in benefits for time and fuel to the regions.

(RTANZ have agreed to pay \$12 per truck as a Toll.)

This Toll will pay off the road in 41 years, courtesy of the truckers.

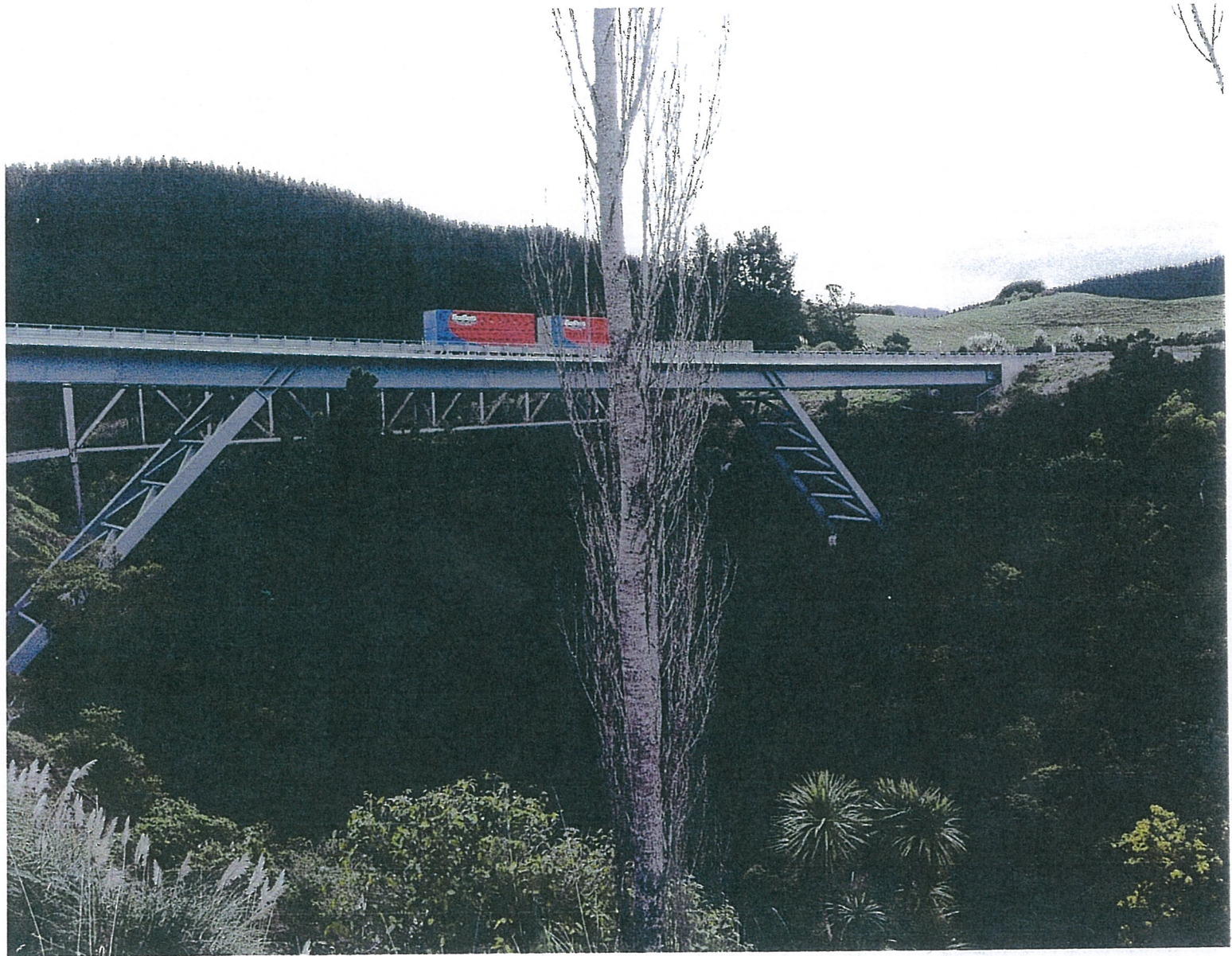
NZTA - VEHICLES ON HIGHWAY

Details	Year Date	Vehicles Ave/Day	Trucks Ave/Day	Cars Ave/Day
Tutira = Sandy Creek Road between Matahorua Road trucks 24.7% + Cars 75.3%	2011	1645		
	2012	1666		
	2013	1682	415	1267
	2014	1700	420	1280
Te Pohue = 1km North (Telemetry Site) Trucks 18.6% + Cars 81.4%	2011	2808		
	2012	2794		
	2013	2782	517	2265
Gisborne Rakauroa (Parahohonu Bridge) Trucks 21.3% + Cars 78.7%	2011	1061		
	2012	968		
	2013	903	192	711

Napier to Gisborne H2 is the only highway to a major port (Napier) that is a black road - 'HIGH RISK'. (meaning high fatal and serious injuries). All other major ports in NZ are green roads - 'LOW RISK'.

RESULTS (Ratio per 100) Vehicles Ave/Day - NZTA Official Figures

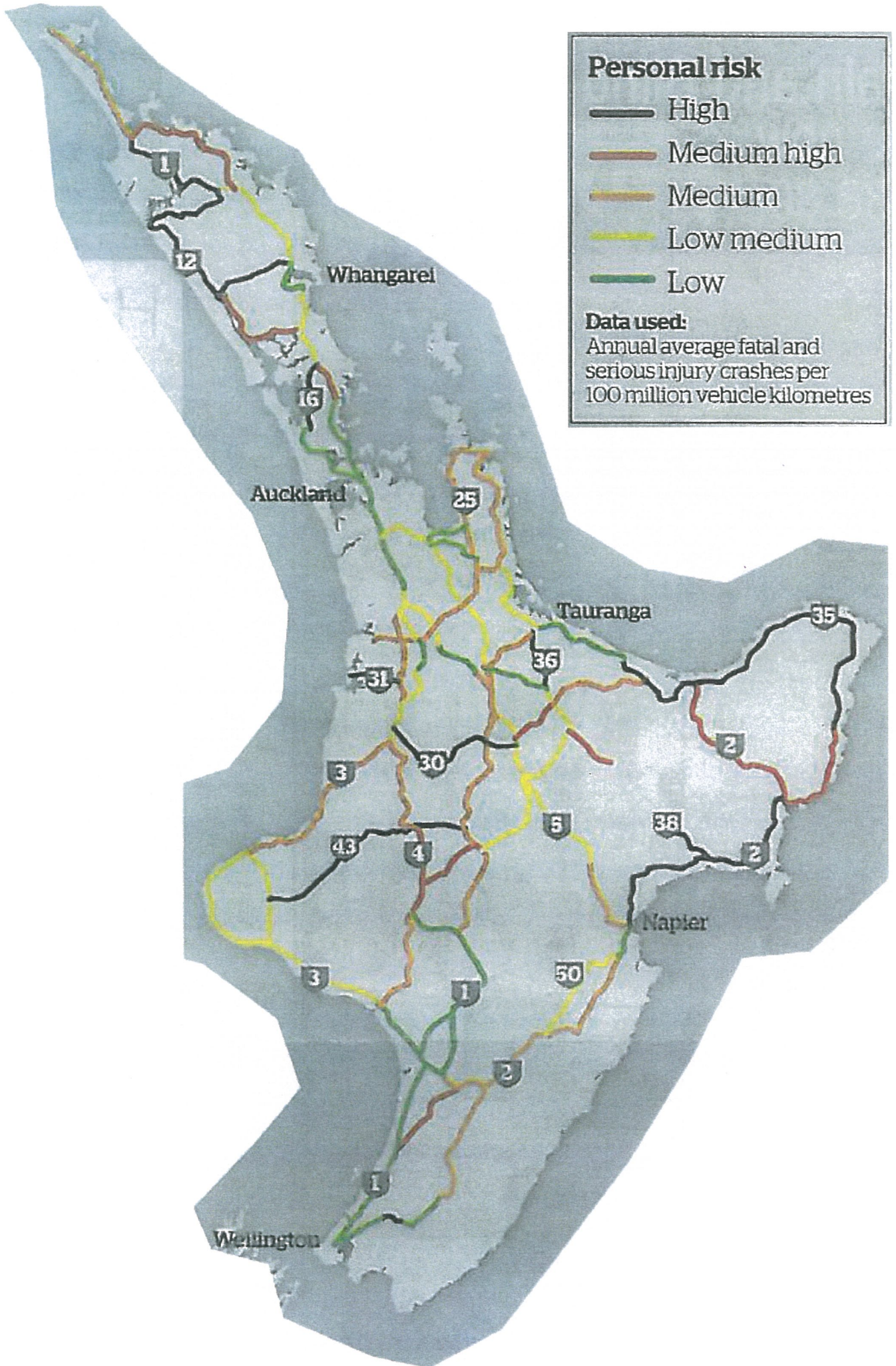
From:	Taupo Te Pohue (SH5)	Wairoa Tutira (SH2)	Gisborne Rakauroa (SH2)
Trucks	517	415	192
	Ratio %	Ratio %	Ratio %
	55:45	68:32	
	(11 to 9)	(7 to 3)	
Cars	2265	1280	711
	Ratio %	Ratio %	Ratio %
	64:36	64:36	
	(2 to 1)	(2 to 1)	



STAGE THREE

INCREASED COMFORT FOR MOTORISTS

- == Economic growth for the East Coast economy.
- == Safer driving conditions due to larger sweeping radius corners.
- == Eliminating 69 low speed (Average 48kph) corners and over 25kms of very steep grades. (Devils Elbow and Waikare Gorge)
- == Increase tourist numbers to the Wairoa/Gisborne region.
- == Fuel and carbon emissions saving for the transport industry with higher safety and reliability of deliveries.
- == Less chance of road closure due to unstable country, eg; Sept 2014 - 2 days slips and huge boulders across Devil's Elbow on the only traffic link from Napier North to Wairoa/Gisborne.
- == Eliminates railway line maintenance.
- == Eliminate the large cost of maintenance to the Tangoio, and Putorino roads.
- == This completely opens the door forever for Gisborne and Wairoa Isolation.



MATAHORUA GORGE BRIDGE

At 137 metres long and 61 metres high, this is a “design/build” project. The unit cost is \$40,000 per metre which is incredibly cheap for this type of structure - this uses 30% less steel than normal and was an award winning and European designed and patented bridge.

THE CONTRACTORS were all from Hawke’s Bay and are still available.

DOWNER Hawke’s Bay was the leading contractor.

EASTBRIDGE NAPIER - Welding and Steel.

NAPIER SANDBLASTERS - Blasting and Painting

FIRTH’S CONCRETE NAPIER

CONCRETE STRUCTURES NZ LTD HASTINGS - Structures (own the largest crane in NZ bought for this project and still own it)

The two viaducts that are required for the new highway will be identical to the Matahorua Gorge Bridge on very similar ground. These two bridges should cost about the same to build as the Matahorua Gorge Bridge with all these contractors available. The benefit from these contracts will flow through to Napier and Hastings to the value of \$20-25 million which will benefit Hawke’s Bay like the Christchurch Earthquake.

The roading also would benefit Hawke’s Bay contractors by \$30-35 million. Grand Total \$60M.

THE CONCLUSION

We have taken into account the annual cost of maintaining both an uneconomical rail link and a road route that traverses some of New Zealand's most unstable country and is the only road going to a port (Napier Port) in NZ to be graded as a 'Very High Risk' Strategic Highway.

Since Cyclone Bola (1988) the railway line has spent years closed, this proves that it is obviously un-sustainable to continue pouring money into this scheme.

When we consider that the Gisborne/East Coast province produces and supplies commodities largely outside it's own area, it is imperative that we have a roading infrastructure, shifting 70% of Gisborne's freight and 100% of Wairoa's freight, that is situated on the best possible terrain.

This will be only a once in a lifetime opportunity to transform completely this vital and strategic main highway.

NOTE: This proposal is supplied with the support of qualified civil engineers, bridge builders and government statisticians. Figures provided are indicative only as of June 2014.

THE CONCLUSION II

Finally this proposal has been 100% supported by the Road Transport Association NZ who would be prepared to pay a truck toll of up to \$12 each way to transform this highway.

The road would be HTMV65 Grade, 10 metre wide Super Highway and free to all cars, motorbikes, caravans and small trailers. The toll suggested would pay for the road in approximately 40 years, using NZTA figures for truck volumes.

The Government Road Transport will recover all their initial capital outlay from the tolls, within 40 years just as the Auckland Northern Gateway Toll Road which is now operating with a 35 year payback.

This is virtually a very generous gift to Hawke's Bay/Wairoa/Gisborne from the Road Users (RTANZ) at no cost to taxpayers at all and will deliver a 21st Century Super Sunshine Highway from Hawke's Bay to Wairoa and Gisborne.

WOULD YOU LIKE A ROAD LIKE THIS FROM WAIKARI
GORGE TO ESKDALE?



The new 2011 Matahorua Bridge and 9 metre wide road beside the 1931 Rail Viaduct looking South.

**RLTP Submission Support Document
Napier – Gisborne Transport Dilemma 13th February 2015 – HB Regional Council**

The Road Transport Association supports the submission in its entirety but would also like to make it clear it also supports multimodal transport options where they can be economically justified, however in this case there are large sums of money needing to be spent on both the rail and the State Highway corridors of which there is limited funding (if any) for either project at present so industry is fully supporting superior self-funded State Highway improvements that satisfies the requirements of both Freight and passenger transport and meets the needs of the NZ Transport Agencies objectives of Safer Journeys.

Stage One and two of the proposal has huge benefits in terms of achieving what is required of the NZ Transport Agency within our region to open the corridor up safely to High Productivity Motor Vehicles in line with Government initiatives for “more freight on less trucks” with operators benefitting by having a flatter and safer road network than what is currently provided to gain better economical operating costs. Industry does realize the realignment of the Waikare Gorge is necessary with or without the project for full High Productivity Motor Vehicles access between Gisborne and Napier, however the cost of manufacturing bridges and shifting construction equipment such as cranes and machinery would be dramatically reduced if the two projects were combined saving the region a substantial amount boosting economic benefits earlier than forecast.

Other benefits that would come with natural attrition from such projects is the recent conversation around carbon footprint which was had at the G20 summit attended by the Honourable John Key. Industry has one large transport company within New Zealand that has already received a signed fourteen year contract with Toyota New Zealand for transport of their product range due to buying into the EECA fuel savings program substantially reducing their CO2 emissions giving Toyota a carbon neutral status which is something to be proud of on the world stage. The potential combined savings of CO2 emissions for both truck and car on the 40 kilometre stretch of road from Napier to Tutira alone would equate to 2,175.38 tonnes based on 240 annual business days of work per annum of which would dramatically increase with changes to volumes of traffic or the work day calendar and the completion of the Waikare Gorge realignment.

Other issues that support the proposal are recent road closures on SH2 (devils elbow) North of Napier and SH2 Waioeka Gorge North of Gisborne to Tauranga and Auckland with the only route available for heavy vehicles and 50MAX being via SH5 the Napier/Taupo Road.



This adds substantial costs to the operator and the customer but the ability to meet their client's demands is paramount which would only improve the burden of the extra costs and travel times with less kilometres of travel by using the proposed route leading directly onto SH5 further north of Napier rather than the existing corridor which on a return journey equates to an added two and a half hours of travel time which puts pressure on operators and professional drivers to comply with the Logbook and Work Time Rule considering the nearest opportunity for drivers to take a break or obtain overnight accommodation is on State Highway 2 between Café 287 near Wairoa and State Highway 5 the Rangitaiki Tavern near Taupo approx. 5.5 hours apart with a fully laden vehicle.

Unfortunately in the case of the rail network there is no direct link from Gisborne or Hawke's Bay to Auckland and all rail movements North must first go South to Palmerston North then North to Auckland which adds both substantial time and costs and puts the many perishable goods that are grown in both regions at risk on any given day making rail a less likely mode of transport with time sensitive freight reaching its destination hence the need for better and safer roads that will remain open during severe weather events allowing continued freight and passenger movements and prosperous economic growth to both regions 24 hours per day 365 days of the year.

Thank you for your time.