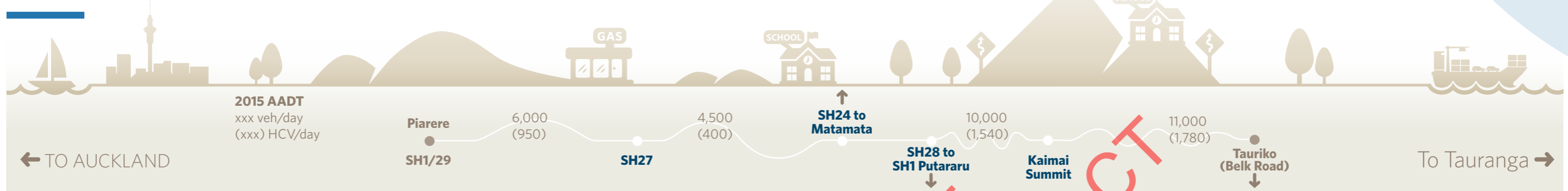
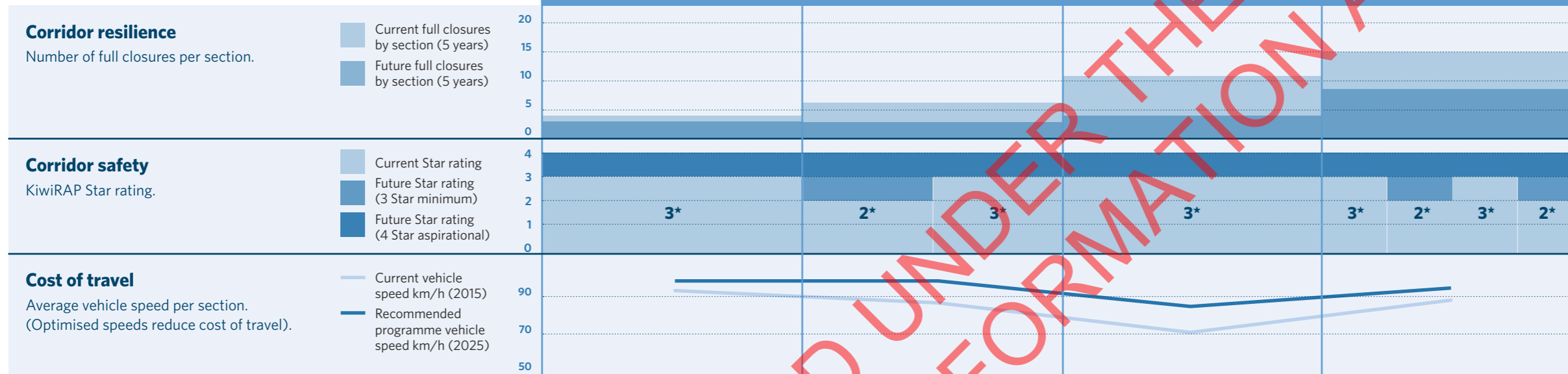


SH29 PIARERE TO TAURIKO RECOMMENDED PROGRAMME



KEY PROBLEMS



RECOMMENDED PROGRAMME

Outcomes

- 24 fewer deaths and serious injuries over 5 years
- 12 less closures (per 5 years)
- Mean operating speed of **89km/h** by 2030
- 3.5 min** Average travel time saving, trucks approx. 5 min.

Programme investment profile
H/H/0.8-1.4 for SH29

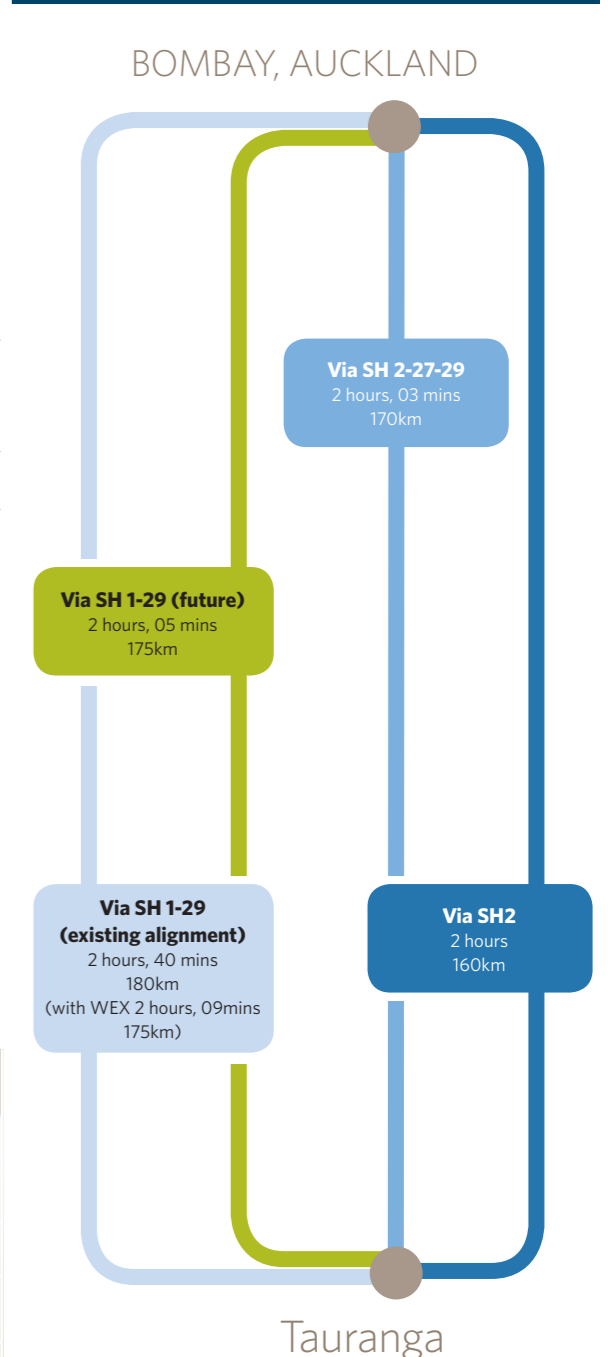
Programme cost range*
\$330m - \$530m
over 15 years

*Excludes cost escalation. Includes property.

The recommended programme is largely operational interventions such as smarter technology to improve enforcement and driver information coupled with online enhancements. Policy changes, e.g. differential charging may also help achieve the 'right traffic on right route' outcomes being sought. The Kaimai Loop is the largest capital intervention targeting a significant service level gap.

DETAILED BUSINESS CASE	Passing lanes, intersections and corner easing	Intersection upgrades and Kaimai Loop	2+1 upgrade Kaimai Summit to Tauriko
Priority	First priority	First priority	Second priority
Cost	\$100m-200m	\$164-246m	\$100-160m
BCR	1.1-2.0	0.7-1.0	0.9-1.5
Interim activity			Intersection safety improvements Bridge widening works
Timing	2017-2025	2017-2025	2025-2035

The Auckland - Tauranga journey



SH29 PIARERE TO TAURIKO

State Highway 29 (SH29) is a key part of New Zealand's transport network and is the preferred route for road-based freight between Auckland and Tauranga when the Waikato Expressway is complete.

Its strategic importance is recognised by its one network road classification (ONRC) as a national strategic (high volume) road.

Rail performs well for freight in the corridor. Looking to the future, the 2014 National Freight Demand Study forecasts freight in the Upper North Island to increase by approximately 60 percent (by tonnes) by 2045; KiwiRail has made considerable investment in the line's performance and capacity to ensure it continues to provide a high level of service and meet anticipated demand into the future. Key constraints for the East Coast Main Trunk line in the future are a lack of capacity on the Auckland network between Westfield and Wiri and operational constraints at Port of Tauranga. There is the potential for these limitations to be removed by construction of a third rail line at Wiri and efficiencies in freight logistics and storage/holding capacity in the Port area.

SH29, which traverses the Kaimai Range, currently has a sub-standard safety record, poor resilience and a higher cost of travel (due to the gradients over the Kaimai Range) compared to other routes in the area. The current level of service and alignment of SH29 is not commensurate with its one network road classification as a national strategic (high volume) road or its identified role as the preferred freight route to and from the Port of Tauranga.

The recommended programme includes operational and capital improvements. Enhancing the customer's journey experience can be achieved with better integrated and timelier information and convenient service facilities. Improvements are safety focused and will ensure a consistent transition from SH1 to SH29. A Kaimai Range western bypass (loop) will significantly improve safety, reliability and the cost of travel by reducing the grade and providing a dual carriageway in both directions. Safety improvements (including realignments and intersections) on the approach into Tauriko complete the recommended programme. It will provide for safer, more resilient and less costly journeys that will contribute to economic growth. Investment in this programme will help encourage 'right traffic on the right route' and value for money outcomes by encouraging SH1/29 for freight and enabling alternative routes such as SH2 and SH27 to focus more on local and regional travel demands.

Whilst travel times between Auckland and Tauranga on SH1/29, SH2 and SH2/27/29 are now comparable, SH2 and SH27 still maintain a degree of attraction for freight given the shorter distance on these corridors. Providing improved customer amenity on state highways 1/29 and targeting levels of service on the lower classification routes, coupled with variable road pricing in the future will further support the desire to have the 'right traffic on the right route'.

PROGRAMME MULTI-CRITERIA ASSESSMENT

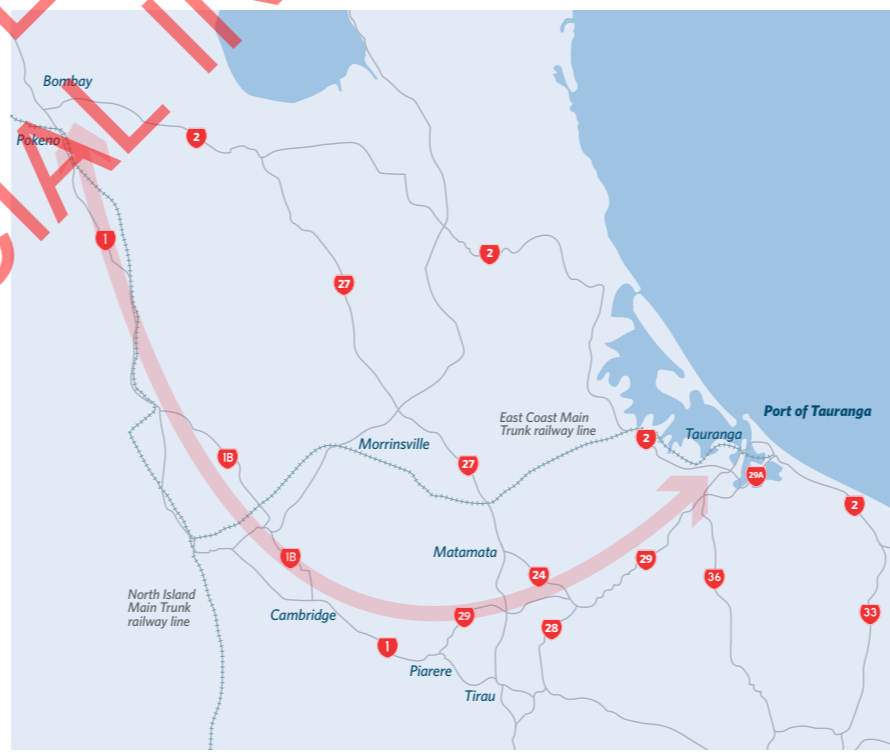
The programmes are different combinations of activities. Alternative programmes were developed and assessed against the investment objectives and other criteria.

	Programme 1	Programme 2	Programme 3	Programme 4	Programme 5	Programme 6	Programme 7	Programme 8	Programme 9	Programme 10	Programme 11
	Safety	90 km/h efficiency	ONRC	Resilience	Low impact	Balanced programmes developed by stakeholders	Balanced programmes developed by stakeholders	Balanced programmes developed by stakeholders	Balanced programmes developed by stakeholders	Balanced programmes developed by stakeholders	ONRC Plus
Summary											
Investment objective 1 - reduction of closures (5 years)	9	12	16	9	1	10	12	15	12	12	16
Investment objective 2 - reduce cost of travel (time savings (mins))	2.3	3.8	6.1	1.3	0.2	1.9	3.5	1.5	3.6	2.8	6.1
Investment objective 3 - crash exposure rating (collective, previously medium-high)	Medium	Medium	Low-medium	Medium-high	Medium-high	Medium	Medium	Low-medium	Medium	Medium	Low-medium
Reduction in hours SH29 is closed (5 years)	38	48	64	34	3	39	48	59	48	47	64
Reduction in DSI's per 5 years	18	24	32	17	2	19	24	29	24	23	32
Feasibility	-	-	--	0	0	-	-	-	-	-	--
Affordability	-	-	--	0	++	-	-	-	-	-	--
Public / Stakeholders	-	0	-	-	-	0	0	0	-	0	-
Right traffic / Right mode / Right route	0	-	--	0	0	0	0	0	0	0	--
Cultural, Social and Environmental Effects	0	-	-	0	0	-	-	0	-	0	-
Safety	++	++	+++	+	0	++	++	++	++	++	+++
Economy	+	+	++	+	0	+	+	+	+	+	++
Ranking	9	7	2	10	11	8	1	5	4	6	2
Average score	4.8	5.7	7.0	2.9	1.9	5.5	7.8	6.4	6.8	6.1	7.0
Cost (\$m)	\$280-430	\$475-770	\$3,300-5,900	\$180-295	\$0.8-1.3	\$287-490	\$330-530	\$485-850	\$340-545	\$328-532	\$3,305-5,905
Cost NPV (\$m) 2025	\$139-214	\$236-383	\$1,640-2,932	\$89-147	\$0-1	\$143-244	\$163-234	\$241-422	\$169-271	\$163-264	\$1,643-2,935
Programme Benefits NPV 2025 (\$m)	\$143	\$222	\$994	\$55	\$10	\$166	\$225	\$186	\$225	\$190	\$994
BCR range	0.7-1.0	0.6-0.9	0.3-0.6	0.4-0.6	14.7-23.9	0.7-1.2	0.8-1.4	0.4-0.8	0.8-1.3	0.7-1.2	0.3-0.6

Recommended programme

STAKEHOLDERS INVOLVED IN THE PBC

- New Zealand Police
- Kiwirail
- Hamilton City Council
- Tauranga City Council
- Western Bay of Plenty District Council
- Matamata Piako District Council (representing Waikato Regional and Waipa District councils)
- Bay of Plenty Regional Council
- Port of Tauranga
- Freight Logistics Action Group
- Road Transport Association
- Automobile Association
- Iwi (engagement is ongoing)



Programme 7 was ranked first and was selected as it clearly delivers well against the investment objectives, and does so in an economically efficient and affordable way. It represents value for money, it will improve regional connections in the area and help to encourage the 'right traffic on the right route'.

TRIGGER POINTS				
Trigger	Time	Uncertainty	Impact on programme	Comments
Growth forecasts in Tauranga and surrounds change	Reasonably foreseeable	Medium	Increased (or decreased) demand may accelerate implementation of Kaimai Range projects	Accelerated need to invest
Port of Tauranga expansion	Post 2020	Possible	High due to increased heavy vehicles	Increased need to invest in corridor
Rail mode share	Post 2020	More than likely	Potential for less heavy vehicles on SH29	May require investment in other parts of network