



TRANSIT NEW ZEALAND'S 10-YEAR STATE HIGHWAY PLAN AND FORECAST FOR 2008/09 TO 2017/18

JUNE 2008

Incorporating Transit's 2008/09 Land Transport Programme



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Appendix 1 – State Highway Activities for 2008/09 (Land Transport Programme)

Appendix 2 – Contribution of generic projects to NZTS and LTMA objectives



The past two years stemming from the Government's 2006 Budget have been pivotal in the development of an efficient and sustainable land transport system for the future of New Zealand. The new system being set in place means a stronger integration between state and local transport planning. It ensures the expansion of safe and environmentally responsible transport options for communities, including improved cycling, pedestrian and bus access.

The Government's five-year guarantee of funding for a plan of works – now entering its third year – has provided stability and security for the rolling out of Transit's portfolio of large state highway projects. The certainty that this has given our stakeholders is evidenced by the smaller than usual number of submissions on this year's Land Transport Programme consultation document.

The next step in the future-proofing of the land transport system is the combining of two transport agencies – state highway planner, builder and operator Transit New Zealand with Land Transport New Zealand – into the one New Zealand Transport Agency (NZTA). The efficiencies expected to arise from this union will ensure a strong focus on value for money and an appropriate balance of land transport activities.

These are exciting times – the end of one era and the start of another in which there are many opportunities for the NZTA to build on the advances made thus far.

For one agency, however, there can be only one board. The establishment of the NZTA in July this year means the disestablishment of the Transit and Land Transport New Zealand boards.

I would like to take this opportunity to thank Transit's Chief Executive Rick van Barneveld and his staff for their inspired and diligent work that I have been able to see at first hand. It has been a privilege to work with you all.

Bryan Jackson
Acting Chairman



The Government's aims for the future of land transport

This 10-year State Highway Plan and Forecast for 2008/09 to 2017/18, incorporating Transit's 2008/09 Land Transport Programme, marks year three of the five-year plan of works made possible by Budget 2006.

Budget 2006 injected \$1.3 billion in extra funding into the National Land Transport Programme to complete a portfolio of "key deliverable" projects within this timeframe. The Government's five-year funding guarantee afforded the greatest level of stability to transport sector investment and Transit is currently on schedule to deliver the portfolio of just over 100 projects.

A series of changes are taking place in the land transport sector to ensure that it can deliver on the Government's vision of an integrated, safe, responsive and sustainable land transport system as set out in the New Zealand Transport Strategy and the Land Transport Management Act 2003.

The 2007 Next Steps Review focused on changes to the funding and planning of land transport. These have been incorporated in the Land Transport Management Amendment Bill, currently before the select committee. As a result, a new agency, the New Zealand Transport Agency, will combine the activities of Transit New Zealand and Land Transport New Zealand from July 2008.

During the change period, both agencies, together with the Ministry of Transport, will continue to deliver on their current work programmes.

Fulfilling the aims of the New Zealand Transport Strategy

The 2007 Transit National State Highway Strategy is the framework for future activities and sets out how Transit will ensure the state highway network contributes to the New Zealand Transport Strategy's objectives of economic development, safety and personal security, access and mobility, public health and environmental sustainability.

While we remain focused on the delivery of essential infrastructure, especially when completing urban and

inter-regional networks, we are increasingly responding to the challenges of climate change and resource efficiency. Our work promoting public transport initiatives and safe walking and cycling facilities on state highways is part of this. Transit recognises that it is a key player in managing the demand for travel and is working in partnership with other agencies, in particular local and regional government, on an environmentally sustainable approach.

Last year the Government launched its Sustainable Transport discussion document to update the New Zealand Transport Strategy (UNZTS). It recognises that the creation of a truly sustainable transport system – one that delivers on our environmental as well as economic and social needs – is not optional. Reducing transport's contribution to greenhouse gas emissions is vital.

Marrying the needs of everyone in society from industry, vehicle owners and local government to public transport users requires compromises and collaboration to succeed. The UNZTS is planned for publication in July 2008, and will provide a high-level strategic plan to enable this to happen, with indicative targets through to 2040.

Strategic plans, however, need short-term actions and priorities on land transport funding. This need is fulfilled in the new Government Policy Statement (GPS) due for release in July this year. It is a statutory document that will be issued on a three-year basis and will define the activity classes and range of funding to be made available for a six-year period, with forecast funding ranges out to a 10-year period.

Changes in funding and planning in the Land Transport Management Amendment Bill

Changes in funding and planning of land transport activities signalled in the Land Transport Management Amendment Bill include:

- › A need to fill the strategic planning gap between the broad directions for transport outlined in the New Zealand Transport Strategy and the delivery of programmes of works and services

- › The introduction of short to medium term funding policies and investment priorities that will be reflected in the Government Policy Statement, including reinforcing a “value for money” ethos
- › Regular reviews of funding levels to ensure the balances between investment priorities are sufficient to achieve desired outcomes
- › Enabling a more consistent approach to integrated transport planning at a regional level, including preparation of regional land transport programmes covering all transport activities, including state highway activities
- › Reducing “planning churn” by extending the annual land transport planning cycle to a three-yearly basis
- › The full hypothecation of all fuel excise duties to the National Land Transport Fund as from July 2008, which will ensure all revenue collected from motorists will be used for developing and maintaining the land transport network, including honouring the Government’s current commitments.

Delivering certainty

The expenditure reflected in this State Highway Plan and Forecast differs from that shown in last years document, as the debt funding for completion of the Auckland Western Ring Route has been removed

It covers large, small and medium-sized projects, passing lanes, walking and cycling projects, stock effluent disposal facilities and strategic studies. Large projects in the “key deliverables” portfolio are shown in the tables and on the maps as a reminder of which projects are committed and which are programmed. An updated “key deliverables” document is available on Transit’s website in the form of a list of large projects to be delivered by 2010/2011.

Small and medium sized projects are also shown on the tables and maps. Projects that have been either completed or substantially completed are no longer shown.

What are the key differences?

This State Highway Plan and Forecast includes key transport issues for each region, updated tables and maps to show if projects are committed or programmed and the location of these projects on the state highway network.

The main difference between this year and last year is that an extended programme for small and medium-sized projects has been created, including passing lanes, walking and cycling projects, stock effluent disposal facilities and strategic studies for each region. Previously, only a one-year programme was shown but this is now extended to three years. This reflects our response to consultation feedback received last year.

Capital Improvements

The “key deliverables” portfolio is proceeding well. Land Transport New Zealand will decide the funding type (Nationally allocated – \$N, or regionally allocated – \$R) for large projects at the time of application, therefore we are not showing funding type other than where projects are joint funded.

Projects listed in the small to medium-sized group are shown in priority order as defined by Land Transport New Zealand’s funding allocation process. They are listed as either committed or programmed. Committed projects are those that are funded and underway. Programmed projects are ready to have the final or next phase started. It is envisaged that at least the investigation stage of any new project will be undertaken within three years.

To achieve value for money, projects may be brought forward from future years, subject to suitability and funding availability. This is to compensate for those projects in the programme year that are delayed by unforeseen circumstances. Small to medium sized projects may be \$R or \$C funded by regional agreement.

Previous forecasts assumed additional revenue and expenditure for the completion of the Auckland Western Ring Route. Transit continues to progress the Auckland Western Ring Route projects including Waterview Connection, with the objective of

completing the route by 2015. Funding arrangements to allow project construction are currently under investigation. Funding options include the use of a Public Private Partnership (PPP), as is being investigated by the Waterview Connection Procurement Steering Group.

Transit's current expenditure programme provides funding to continue progressing the Waterview Connection project over the 2008/09 year, and the investigation and consenting phases are proceeding to a schedule that will allow for completion of the Auckland Western Ring Route by 2015.

Maintenance

The level of activity for 2008/09 is up on the current year (allowing for escalation) with modest increases in the levels of maintenance and operations activity arising from increased traffic management efforts and tighter environmental controls. The cost of maintenance is very small when compared with the combined costs of vehicle operations, travel time and social costs of accidents.

The increase in renewal expenditure is more significant. It reflects the continuing growth in heavy commercial vehicles, together with moves to address the backlog in structural repairs and renewals from the years 2005-2007 when cost escalation resulted in some planned work being scaled back. Fuel and bitumen prices have again surged and there remains concern about the effects of oil price changes in the future.

From the Transit Board's perspective, asset management and maintaining existing operations remains paramount. Detailed planning of future expenditure required to maintain levels of service indicate that significant funding, in addition to currently forecast allocations, may be required over the next 10-years. If this expenditure is required, the Board has resolved to prioritise this above other expenditure.

The most significant structural strengthening of the Auckland Harbour Bridge clip-ons has been programmed to start in July 2008 at a cost of \$45M. The work is part of on-going maintenance and is being undertaken to ensure that the box girders remain fit for purpose for at least the next 30 years.

Consultation

The number of submissions this year has halved from 268 last year down to 135. This is considered to be a reflection of the inherent stability of the programme. The AA National Submission focused on just three issues: large safety projects, congestion in Auckland and general road safety (KiwiRAP).

Common topics across the submissions included provision of more passing opportunities, safe walking and cycling facilities and gaps in the network of stock effluent disposal facilities. Transit is exploring and implementing a greater range of options in these areas through its new extended programme for small and medium-sized projects.

Other common concerns included the number of one-way bridges remaining on state highways. This is being addressed through a draft bridge replacement programme currently in development.

A number of additional strategic studies have been requested. Full consideration has been given to those that are linked to developments and growth areas and they have been prioritised based on the National State Highway Strategy and development growth expectations.

A number of suggestions for new projects or for advancing existing projects were received. Some have been previously considered and not listed but will be reconsidered if conditions change. Other suggestions will be reviewed this year for feasibility.

Issues around designations, resource consents, material shortages and community agreement on projects continue to affect what can be delivered and when. It continues to be a top priority for Transit to resolve these issues promptly with help from our transport partners, especially local and regional government and communities.



Table 1 – 10-year Financial Forecast 2008/09

Maintenance and Improvements

	08/09 (\$M)	09/10 (\$M)	10/11 (\$M)	11/12 (\$M)	12/13 (\$M)	13/14 (\$M)	14/15 (\$M)	15/16 (\$M)	16/17 (\$M)	17/18 (\$M)	Total (\$M)
Maintenance (Escalated) ²	Note ¹										
Road Maintenance and Operations	231	251	264	279	294	310	328	346	365	385	3,052
Road Renewals	185	201	212	223	236	249	262	277	292	308	2,444
Property Management	14	15	16	17	18	19	20	21	22	23	185
Preventive Maintenance	5	5	6	6	6	7	7	7	8	8	66
Emergency Works	34	36	37	39	40	41	42	43	45	48	405
Sub-Total ²	469	508	535	564	594	626	659	694	732	772	6,153
Improvements (Escalated) ³											
Minor Safety Projects	33	35	36	37	38	39	41	42	43	44	388
Committed Projects ⁴	530	287	243	0	0	0	0	0	0	0	1,060
New Large Projects ⁴	62	155	257	513	395	375	536	560	650	650	4,153
New Small & Medium Sized Projects	93	93	96	59	61	64	67	70	72	72	747
Property Purchase	96	58	60	45	45	66	68	70	72	74	654
Walking and Cycling	5	5	5	5	6	6	6	6	6	7	57
Sub-Total	819	633	697	660	545	550	718	748	843	847	7,060
Community Road Safety Programme	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	5.6
Administration ⁵	56.6	59.5	61.2	63.2	65.1	67.0	69.0	71.1	73.2	75.4	661
TOTAL EXPENDITURE	1,345	1,201	1,294	1,288	1,205	1,243	1,446	1,513	1,649	1,695	13,880
Capital injection for ALPURT B2	39										39
NLTP anticipated funding	1,306	1,201	1,294	1,287	1,205	1,243	1,446	1,513	1,649	1,696	13,840
TOTAL REVENUE REQUIRED	1,345	1,201	1,294	1,288	1,205	1,243	1,446	1,513	1,649	1,695	13,880

1 Grey shading denotes remainder of 5-year Plan (2006/07 – 2010/11). This remains on course for successful completion.

2 Cost escalation for maintenance has been applied using Land Transport New Zealand's forecast: 7% (2008/09), 6% (2009/10), 3% (2010/11 and beyond). Transit is re-evaluating Road Renewals expenditure beyond 2008/09, as recent data suggests a trend of deteriorating asset condition.

3 The expenditure on improvement works incorporates a cost escalation allowance of 3% per year.

4 Previous 10-year financial forecasts assumed additional expenditure of \$1,365M associated with the Waterview Connection project. At that time, alternative funding sources to provide matching revenue were under investigation. This year's financial forecast includes sufficient funding to ensure that progress on preliminary design and consenting for Waterview Connection can continue to a schedule that will allow for completion of the Auckland Western Ring Route by 2015. Funding arrangements for completion of this project are under investigation and include the option of using a Public Private Partnership (PPP).

5 An additional sum of \$0.6M p.a. has been added due to increased costs for Austroads membership.



Table 2 – State Highway Activities for 2008/09 (Land Transport Programme)

		Activity Name	Priority (P)	Indicative Start Date Quarter (Q)			Indicative Cash Flow (\$,000)
Maintenance		Road Maintenance and Operations	P1	Q1			231,000
		Road Renewals	P1	Q1			185,000
		Property Maintenance	P1	Q1			14,000
		Preventive Maintenance	P1	Q1			5,000
		Emergency Works	P1	Q1			34,000
Administration			P2	Q1			56,600
Commitments		Large Projects	P3	Q1			530,150
		Small and Medium sized projects	P3	Q1			27,000
Improvements		Minor Safety Projects	P4	Q1			33,000
		New Projects (as listed below)	P5	Q1			22,950
Region	SH	Activity Name		Indicative Start Date Quarter (Q)	Phase *	Total Phase Cost (\$,000)	Indicative Cash Flow (\$,000)
Auckland	16	Pungunui Stream Bridge Replacement		Q2	C	4,700	560
Auckland	1	Newmarket Viaduct to Greenlane Aux Lane		Q2	C	17,300	1,400
Canterbury		Christchurch Travel Demand Management		Q2	D	320	320
Bay of Plenty	2/29	Tauranga Central Corridor Improvements		Q4	C	2,600	500
Wellington	1	Basin Reserve Improvements		Q1	I	2,700	320
Waikato	1/3	Hamilton Southern Links		Q2	I	3,900	2,100
Waikato	1	Te Rapa Bypass		Q2	D	5,000	2,300
Auckland	1	Warkworth Stage 1		Q3	C	15,000	6,000
Wellington	2	Melling Interchange		Q2	I	5,600	1,100
Waikato	1	Huntly Bypass		Q4	D	9,900	500
Waikato	1	Hamilton Bypass		Q4	D	9,900	550
Hawke's Bay	2	Waipukurau Overbridge Realignment		Q2	C	6,200	1,500
Canterbury	1	Christchurch Northern Arterial Rural		Q1	I	1,500	1,000
Canterbury	1	Memorial Ave to Yaldhurst Road 4L		Q2	D	820	520
Canterbury	1	Saywers Arms to Memorial Ave 4L		Q1	D	550	210
Canterbury	74	QE2 4L Northern Arterial to Hills Rd Ext		Q2	I	1,000	500
Canterbury	1	Western Belfast Bypass		Q4	I	1,050	200
Northland	1	Akerama Curves Realignment and PL		Q2	C	9,500	150
Waikato	1	Long Swamp to Rangiriri 4L		Q3	D	2,500	300
Auckland	1	Schedewys Hill Deviation		Q1	I	3,600	500
Northland	12	Matakohe Realignment		Q2	I	400	400
Northland	1	Brynderwyn Hills Realignment		Q1	I	960	420
Wellington	2	SH2/58 Grade Separation		Q2	D	1,100	1,100
Nelson-Marlborough	6	Whangamoia South Realignment		Q1	D	1,500	500

* I = Investigation D = Design C = Construction

Notes:

1. Indicative durations of large projects are shown in the regional tables
2. The priority is a requirement of the LTMA and is listed in relative terms

Table 2 – State Highway Activities for 2008/09 (Land Transport Programme) continued

	Activity Name	Priority (P)	Indicative Start Date Quarter (Q)			Indicative Cash Flow (\$,000)
Improvements	Small and Medium sized projects	P6	Q1			66,000
	Strategic Studies	P6	Q2			9,000
	Investigations from Strategic Studies	P6	Q4			4,000
	Improved Driver Information	P6	Q2			5,000
	Improvements Maintenance LOS	P6	Q1			3,000
	Strategic Plan Initiatives	P6	Q3			14,000
	Community Safety	P6	Q1			500
	Property Purchase	P6	Q1			96,000
	Walking & Cycling	P6	Q1			5,000

Notes:

1. Indicative durations of large projects are shown in the regional tables
2. The priority is a requirement of the LTMA and is listed in relative terms

GUIDE TO REGIONAL TABLES – EXAMPLE

AUCKLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

Green icons represent committed phases.
Black icons represent programmed phases.

Identification of problem and potential solutions.

Engineering design of works to be undertaken, including cost estimation.

Construction of final project.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining	Land Transport Programme 08/09	Plan 09/10–10/11	Forecast 11/12–17/18
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The grey symbols show indicative timings given that the investigation or design phase has not been completed.

LARGE PROJECTS

- Auckland Harbour Bridge Storm Water Upgrade §

Denotes funding sources as shown on the bottom of the page.

Appendix 1 lists large projects and their objectives to be achieved under the Act, as well as options and alternatives considered.

Estimated Cost Remaining
\$ < 5M \$\$\$ 20-100M
\$ 5-20M \$\$\$ 100+M

0.5 Environmental Sustainability

SMALL AND MEDIUM PROJECTS

- Rosebank to Te Atatu 8L
- Drury Interchange Traffic Signals
- Orewa Township Upgrade
- Don Buck Road to Huapai Lighting Improvement

Passing Lanes

- Sheepworld Sth Bd PL

Stock Effluent Disposal Facilities

- Bombay Hills (Mercer) SEDF

Walking & Cycling

- Westgate Pedestrian Facility

Strategic Studies

- SH22 Strategic Study Review

Economic Development \$\$\$

Economic Development \$

Safety & Personal Security \$

Safety & Personal Security \$

Safety & Personal Security \$

Safety & Personal Security \$

Environmental Sustainability \$

Public Health \$

Phases shown in grey in the Plan Years are indicative given the preceding phases have not been completed.

Committed construction. Value of remaining works to be funded by Land Transport NZ.

Estimated total cost of project (all phases).

Appendix 2 gives a generic list of how projects contribute to the purposes of the Land Transport Management Act, as well as options and alternatives considered.

Phases shown in the 08/09 year are those programmed to be undertaken.

All projects other than large will be carried out within the first three years of the plan.

Relates to specific projects only

COMMONLY USED ABBREVIATIONS WITHIN THE TEXT AND REGIONAL TABLES

Project Names

AHB	Auckland Harbour Bridge
ATTOMS	Auckland Transit Traffic Operation Management System
CMJ	Central Motorway Junction
SWATT 2010	South Waikato and Taupo Target 2010
UH Br	Upper Harbour Bridge
ALPURT	Albany to Puhoi realignment

Project Type

4L	Four laning
6L	Six laning
8L	Eight laning
ATMS	Advanced Traffic Management Systems
Aux	Auxiliary
BPL	Bus Priority Lane
SEDF	Stock Effluent Disposal Facility

Ext Extension

Imp. Improvement

I/C Interchange

I/S or Int Intersection

Ped Pedestrian

PL Passing Lane

Realign Realignment

SE Seal Extension

SI Safety Improvement

SVB Slow Vehicle Bay

TDM Travel Demand Management

WC Walking and Cycling

Project Related Information

CCTV	Close Circuit Television
SH	State Highway
Var	Various
VMS	Variable Message Signs
NB or Nth Bd	Northbound
Nth	North
SB or Sth Bd	Southbound
Sth	South
East Bd	Eastbound
West Bd	Westbound
Rd	Road
St	Street
\$R	Regional funding
\$C	Crown funding

Related Documents and Organisations

GPS	Government Policy Statement
LTMA	Land Transport Management Act 2003
MOT	Ministry of Transport
NZTS	New Zealand Transport Strategy
UNZTS	Updated New Zealand Transport Strategy
NLTP	National Land Transport Programme
RLTS	Regional Land Transport Strategy



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Northland region include:

- › Road safety, in particular the separation of heavy freight traffic and other traffic (including tourist traffic), and crashes on bends
- › Secure, efficient and safe transport corridors, especially between Auckland and Whangarei
- › Increased forestry traffic over the next few years in line with increased forestry harvesting, with most expected to be exported through Northport at Marsden Point
- › Tourist traffic, particularly on the Twin Coast Highway network linking the Bay of Islands, Cape Reinga and the Waipoua Forest
- › Increased land development, particularly at Ruakaka, Marsden Point, Kerikeri and Waipapa, Bay of Islands, Doubtless Bay, Opononi and Omapere, and Mangawhai. This is resulting in growing traffic volumes, leading to the need for some improvements to the strategic roading network, including state highways
- › Increasing congestion through the Whangarei urban area, including on state highways
- › Lack of passing opportunities
- › Spillages from stock trucks.

How we plan to address these key issues

The terrain in Northland is often difficult, resulting in state highways that are winding and undulating. Northland also has a diverse geology resulting in areas of inherently unstable rock formation known as Onerahi Chaos Breccia. This, together with an almost subtropical climate of high rainfall, results in some lengths of state highway having an uneven, rough surface. Transit will continue to seek engineering solutions to permanently stabilise such areas.

Intensified land use, particularly around Kerikeri and west and south of Whangarei, and growing traffic volumes are placing increasing demands on state highways. The result is a need to improve the alignment of highways and provide more passing lanes, especially on SH1 between the intersection with SH10 at Pakaraka and Ross Road, north of Wellsford.

Transit will also continue to liaise with councils and developers to ensure an integrated approach is taken on development and transportation needs.

Improvements are required on key forestry routes to accommodate the predicted increases in forestry traffic from Northland forests to Northport at Marsden Point. Proposed improvements include the provision of passing lanes, seal widening, and the upgrade of intersections where forestry trucks enter the state highway network. Innovative low-cost solutions to the latter will be required because logging trucks generally use intersections only for the relatively short harvesting period.

Road Safety – Secure and Efficient Transport Corridors

Transit plans to continue to improve the safety and efficiency of state highways. A number of large and small to medium activities have been proposed. These include realignments, intersection improvements and seal widening and guard rails. In conjunction with local authorities, a further stock truck effluent facility is being investigated.

Tourist Routes

Stage 1 of the sealing of SH1 from Waitiki Landing to Cape Reinga was completed during 2004/05. The remainder of the sealing of this 20-kilometre section of state highway is now underway and is expected to be completed in 2009/10. Cape Reinga is a nationally significant tourist destination and sealing will meet tourist expectations and improve safety.

Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. In addition to the many passing lanes already completed, Transit plans to progress further passing lanes on SH1 between Auckland and Kaitaia. A passing and overtaking opportunities study will be undertaken on these routes.

During the consultation process for this forecast, there were requests for progress to be made on four-laning Selwyn Avenue to Fourth Avenue in Whangarei. In conjunction with the relevant local authorities and the Regional Land Transport Committee, Transit will undertake an investigation phase during 2008/09 to define the scope of the project. However, given that this is a transitional year, to a new planning and funding system we have not programmed any further phases for this project.

Walking and Cycling

Four activities for walking and cycling have been proposed in the Northland region to provide new or upgraded pedestrian or cyclist facilities in Otaika, Kawakawa, from Paihia to Haruru Falls, and the Kerikeri River Pedestrian Bridge.

Strategic Studies

We propose to undertake strategic studies between Wellsford and Whangarei to improve our long-term planning and ensure good decision-making.







Maintenance and Operations

Maintenance activities make up a large proportion of the forecast expenditure in the Northland region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 90km and reconstruct 12km of highway
- › Continue a programme of slip site monitoring and management and make provision for emergency reinstatements
- › Carry out corridor maintenance including litter and graffiti removal, routine vegetation control, road marking, maintenance of signs, traffic signals and carriageway lighting maintenance and incident response
- › Continue a programme of minor safety improvements, including drainage improvements, intersection upgrades, seal widening and installing guardrails, in addition to planned capital improvements to address safety issues.

NORTHLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
I	Waitiki Landing to Cape Reinga Seal Ext Stage 2	Access and Mobility	9.8			
I0	Bulls Gorge Realignment	Access and Mobility	0.1			
I	Akerama Curves Realignment & Sth Bd PL	Safety & Personal Security	0.1			
I	Kamo Bypass Stage 2	Access and Mobility	0.8			
I0	Bulls Gorge Realignment	Access and Mobility	\$			
I	Akerama Curves Realignment & Sth Bd PL	Safety & Personal Security	\$			
I	Kamo Bypass Stage 2	Access and Mobility	\$			
I	Snake Hill Realignment	Safety & Personal Security	\$\$			
I2	Matakohe Realignment	Access and Mobility	\$\$			
I	Brynderwyn Hill Realignment	Access and Mobility	\$\$			
I	Selwyn Ave to Fourth Ave 4L *	Access and Mobility	\$\$			
SMALL & MEDIUM PROJECTS						
I	One Tree Point Intersection Upgrade Stage 2	Safety & Personal Security	1.5			
I2	Wairau River S-Bend Realignment	Safety & Personal Security	1.4			
I	Plantation North to Topuni Bridge SW	Safety & Personal Security	0.1			
I	Saleyards Road North Intersection Improvement	Safety & Personal Security	0.1			
I0	Kangaroo Safety Improvement	Safety & Personal Security	0.6			
I	Springfield Road to Oakleigh Service Station Safety Improvement	Safety & Personal Security	2.4			

Total Phase Cost

* further development beyond investigation will depend on future regional priorities

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

NORTHLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

Committed Investigation	Committed Design	Committed Construction
Investigation	Design	Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Total Phase Cost	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
SMALL & MEDIUM PROJECTS (continued)							
I	Whangarei South Entrance Lighting	Safety & Personal Security	0.1				
I	Lily Pond Bridge to Quarry Seal Widening	Safety & Personal Security	0.1				
10	Puketona SH11 Intersection Improvement	Safety & Personal Security	\$				
I	Plantation North Realignment	Safety & Personal Security	\$				
I	Bends South of Kawakawa Realignment	Safety & Personal Security	\$				
I	Mountain Road Seal Widening	Safety & Personal Security	\$				
I	Plantation North to Topuni Bridge SW	Safety & Personal Security	\$				
I	SH14 Intersection Improvement	Safety & Personal Security	\$				
I	Saleyards Road North Intersection Improvement	Safety & Personal Security	\$				
I	Whangarei South Entrance Lighting	Safety & Personal Security	\$				
I	Kaiwaka Bridges Guardrail Upgrade	Safety & Personal Security	\$				
10	Bends South of Wakelin Road Safety Improvements	Safety & Personal Security	\$				
14	Onuwahao Safety Improvements	Safety & Personal Security	\$				
11	Lily Pond Bridge to Quarry Seal Widening	Safety & Personal Security	\$				
11	Taumarere Realignment	Safety & Personal Security	\$				
12	Opononi-Omapere Safety Improvements	Safety & Personal Security	\$				
14	Whangarei Urban Improvements	Safety & Personal Security	\$				
I	Russell Road Intersection Improvement	Safety & Personal Security	\$				























Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

NORTHLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

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	Investigation		Design		Construction



The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
SMALL & MEDIUM PROJECTS (continued)						
I0	Waipapa Road Intersection Improvements	Safety & Personal Security	\$			
I	Port Marsden Highway Interchange	Economic Development	\$			
Passing Lanes						
I	Watercress Creek Sth Bd PL	Safety & Personal Security	1.0			
I	Waioio Nth Bd PL	Safety & Personal Security	1.4			
I	Kaiwaka Sth Bd PL	Safety & Personal Security	0.1			
I	Hukerenui Nth Bd PL Extension	Safety & Personal Security	0.1			
I	Kaiwaka Sth Bd PL	Safety & Personal Security	\$\$			
I	Hukerenui Nth Bd PL Extension	Safety & Personal Security	\$			
I	Old North Road Sth Bd PL	Safety & Personal Security	\$			
I	Waioio North Nth Bd PL	Safety & Personal Security	\$			
I	Callaghan Road Nth Bd PL	Safety & Personal Security	\$			
I	Mountain Rd Sth Bd PL Extension	Safety & Personal Security	\$			
Stock Effluent Disposal Facilities						
I	Whangarei District SEDF	Environmental Sustainability	\$			

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NORTHLAND State Highway Plan and Forecast for 2008/09 to 2017/18

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Walking & Cycling

I	Otaika Pedestrian Crossing Upgrade	Public Health	\$			
II	Paithia to Haruru Falls Pedestrian Facility	Public Health	\$			
II	Kawakawa Township Footpath	Public Health	\$			
10	Kerikeri River Pedestrian Bridge	Public Health	\$			

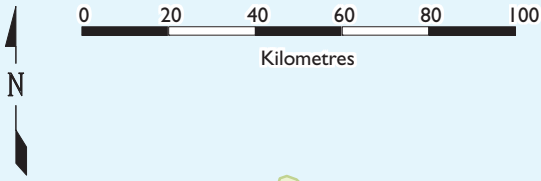
Strategic Studies

- Whangarei to Kaitaia Passing Opportunity Study
- Wellsford to Whangarei Strategic Study
- SH15A Port Marsden Highway Strategic Study
- Western Hills Whangarei North Strategic Study

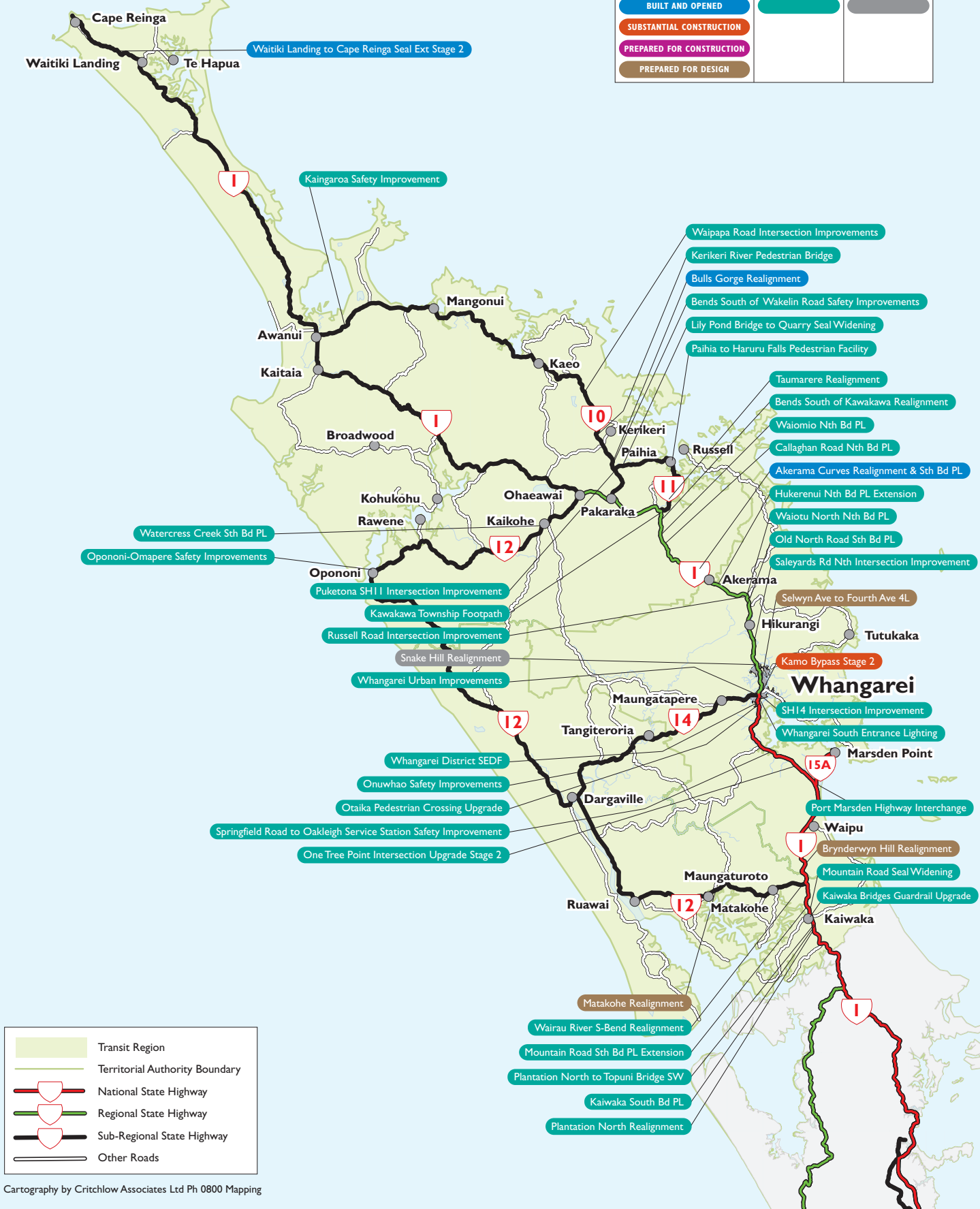
Fig N

NORTHLAND REGION

State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



Cartography by Critchlow Associates Ltd Ph 0800 Mapping



KEY TRANSPORT ISSUES

Transit will work closely with the Auckland Regional Transport Authority and regional and district councils to ensure the best alignment of priorities, to relieve congestion and support regional growth strategies.

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Auckland region include:

- › Severe congestion, resulting in variability in trip times
- › Road safety, in particular on SH1 and SH16 north of Auckland where there is a lack of passing opportunities
- › Traffic growth, driven by population growth
- › An alternative route to SH1 through Auckland
- › Secure, efficient and safe transport corridors, especially between Auckland and Whangarei and SH2 within the Auckland region
- › The impact of land use development because of continuing intensification within the metropolitan urban limit
- › Increased land use development at growth nodes such as Warkworth and Kumeu leading to the need for improvements to the roading network
- › Passenger transport infrastructure requirements.

How we plan to address these key issues

Economic growth and resulting increases in traffic demand will require the state highway network interconnections in and around Auckland to be substantially completed within the next 10 to 20 years to support the Auckland Regional Growth Strategy. They will also need to be sustainably managed in order to relieve congestion, improve travel time and reduce greenhouse gas emissions.

Travel Demand Management is a combination of activities that together seek to influence travel behaviour. Methods include travel plans, traveller information systems and traffic management techniques such as ramp signaling. Transit endorses the principle of Travel Demand Management as an integral component of a sustainable approach to land transport and is actively investigating opportunities for this.

Improvement works encompass the entire region within a particular focus on the Auckland Central Corridor, Northern Busway and the Western Ring Route, including the recently completed and opened Greenhithe Deviation.

Corridors outside the Auckland metropolitan urban limit also require improvements to accommodate increases in inter-regional travel. Proposed activities include improvements to the alignment of existing two-lane highways, seal widening and the provision of passing lanes.

Travel Demand Management

Ramp signalling is one of a number of Travel Demand Management approaches that seeks to influence demand for transport or travel. Installation of signals has commenced on the Southern Motorway, with the Northwestern and Northern Motorways following as an integrated project. Signals are also included as an integral part of forward planning on all of the Western Ring Route. The overall objective is to reduce congestion, reduce journey times and improve journey time reliability during peak travel periods.

Auckland Central Corridor

Auckland Central Corridor activities cover SH1 from Albany to Manukau. Several capacity improvement projects are forecast for the next 10 years. These include projects such as the Victoria Park Tunnel and Newmarket Viaduct replacement, which will add capacity to maximise the performance of the Central Motorway Junction.

Western Ring Route

The Western Ring Route is a proposed strategic motorway running south to north through Auckland, connecting Manukau City, Auckland City, Waitakere City and North Shore City. It is made up of 10 individual projects that need to be completed as a package. It will take traffic from Manukau through Waterview and Hobsonville to Albany to provide a strategic alternative to State Highway 1.

Provision for completion of the Western Ring Route has been included in Transit's State Highway Forecast, but in order to complete by 2015, as planned since August 2005, additional revenue will be needed to fund the required debt. Transit is working on the understanding that Auckland does want the Western Ring Route and wants it completed sooner (2015) than would be possible under current conventional funding.

Significant progress is being made on the Auckland Western Ring Route with the opening of SH18 Greenhithe Deviation during 2007/08, along with progress on SH20 Mt Roskill Extension and the construction start of SH18 Hobsonville Deviation. In addition, significant progress is being made on the development of SH20 Waterview Connection with a PPP option being investigated and a further \$9.8M of funding approved to complete the planning stage in readiness to seek the necessary consents and approvals. At the southern end of the ring route, construction of Manakau harbour crossing has begun.

Public Transport Improvements

Transit considers and makes appropriate provision for public transport for all new projects being developed and ensures there is a close alignment with ARTA's programme. A number of bus priority lanes are being progressed in conjunction with other motorway capacity improvements. While provision for Rail to the Airport has been provided for in the Manukau Harbour Crossing Corridor between the harbour and Walmsley Road.

Road Safety

Transit has identified a number of activities to improve the safety and efficiency on sections of state highway. These include realignments, intersection improvements, seal widening and lighting safety retrofits.

Passing Opportunities

Limited passing opportunities on parts of the rural state highway network lead to driver frustration and accidents. Transit plans to progress passing lanes on both SH1 and SH16 north of Auckland.

Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, two new facilities are being constructed on SH1 at Wellsford and on the Bombay Hills.

Walking and Cycling

Provision for walking and cycling activities is an integral part of state highway planning. These facilities are provided as part of improvement projects on the Western Ring Route where applicable. There is one specific pedestrian facility planned for implementation in the next three years, on SH16 at Westgate, and also the Old Mangere Bridge Walking and Cycling project. Studies currently underway include the scoping of projects to contribute to the regional walking and cycling strategy and options for walking and cycling across the Waitemata harbour.

Strategic Studies

We are proposing to undertake a number of new strategic studies for the Auckland region to improve our long-term planning and assist good decision-making.

Maintenance and Operations

Maintenance and operations activities make up a large proportion of the forecast expenditure in the Auckland region and are due to increase over the next 10 years because of the commissioning of capital projects.

In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, other asset renewals and operations activities include:







- › Resurfacing 56km of multi-lane motorway
- › Resurfacing 29km and reconstructing 1km of rural state highway
- › Improving safety by applying high skid resistance surfacing
- › Continuing to refine maintenance practices to reduce traffic disruptions and noise
- › Continuing to carry out structural and seismic strengthening of bridges, including the Auckland Harbour Bridge
- › Improving techniques and response times when managing incidents on motorways.

In 2008/09 the Transit – managed Traffic Management Unit, a joint collaboration between Transit and six Auckland local authorities providing 24-hour integrated traffic management, incident management and traveller information to road users, proposes to:


- › Continue to improve management of the wider impacts of the expanding motorway construction programme
- › Expand the geographic coverage and improve the functionality of the motorway Advanced Traffic Management Systems
- › Provide an improved traveller information service to users through the traffic website and associated services
- › Increase resource levels to operate travel demand management measures, such as ramp signalling
- › Continue to enhance the management of the critical arterial network by improving co-ordination of traffic signals throughout the region
- › Improve asset management systems for all high technology equipment
- › Improve traffic flow within the region
- › Continue to improve incident management.

AUCKLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

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	Investigation		Design		Construction

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LARGE PROJECTS						
20	Mt Roskill Extension	Economic Development	50.2			
I	Northern Busway PT (Stages 1 & 2)	Economic Development	18.9			
20	Manukau Extension \$	Economic Development	113.3			
Var	Advanced Traffic Management Systems Stage IV-Stage 2	Economic Development	62.4			
I	Southern Motorway TDM (Ramp Signalling)	Economic Development	4.3			
I	Northern Motorway TDM (Ramp Signalling)	Economic Development	8.1			
I6	Northwestern Motorway TDM (Ramp Signalling)	Economic Development	5.2			
I	Auckland Harbour Bridge Storm Water Upgrade	Environmental Sustainability	0.5			
20	Manukau Harbour Crossing	Economic Development	207.1			
I	Northern Gateway Toll Road (ALPURT B2) \$\$	Economic Development	39.6			
I	Auckland Harbour Bridge Moveable Lane Barrier	Safety & Personal Security	8.9			
I	Northcote to Sumner/Auxiliary Lane	Economic Development	2.0			
Var	Western Ring Route (Ramp Signalling)	Economic Development	15.0			
I8	Hobsonville Deviation \$	Economic Development	201.8			
I	Auckland Harbour Bridge Structural Upgrade	Economic Development	42.0			
I	Redvale Interchange #	Economic Development	\$\$			
I	Wainui Interchange #	Economic Development	\$\$			

\$ in conjunction with third party contributions outside NLTP funding
 \$\$ capital injection
 # 100% Developer Funded




































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AUCKLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
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LARGE PROJECTS (continued)						
I	Papakura Interchange Upgrade Stage 1 §	Economic Development	0.5			
I	Victoria Park Tunnel	Economic Development	2.0			
I6	Te Atatu to Royal 6L	Economic Development	1.0			
I6	Te Atatu Interchange Upgrade	Economic Development	0.1			
I6	Pungunui Stream Bridge Replacement	Access and Mobility	0.1			
20	Waterview Connection	Economic Development	8.9			
I	Newmarket Viaduct to Greenlane Auxiliary Lane	Economic Development	1.3			
I6	Brigham Creek Extension	Access and Mobility	37.0			
I6	Te Atatu to Royal 6L	Economic Development	\$\$\$			
I6	Te Atatu Interchange Upgrade	Economic Development	\$\$			
I6	Waterview to Rosebank 8L	Economic Development	\$\$\$			
I6	Rosebank to Te Atatu 8L	Economic Development	\$\$\$			
I6	Pungunui Stream Bridge Replacement	Access and Mobility	\$			
I	Victoria Park Tunnel	Economic Development	\$\$\$\$			
I	Newmarket Viaduct ⊕	Economic Development	\$\$\$\$			
I	Newmarket Viaduct to Greenlane Auxiliary Lane	Economic Development	\$\$			
I	Warkworth Stage 1 §	Economic Development	\$\$			

§ in conjunction with third party contributions outside NLTP funding

⊕ pre construction works

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AUCKLAND State Highway Plan and Forecast for 2008/09 to 2017/18

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	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M

LARGE PROJECTS (continued)




























1	Papakura Interchange Upgrade Stage 1 §	Economic Development	\$\$
2	Kopuku Realignment	Safety & Personal Security	\$\$\$
1	Schedewys Hill Deviation	Safety & Personal Security	\$\$\$

SMALL & MEDIUM PROJECTS

			Total Phase Cost
1	Southern / Northern Motorway Lighting Safety Retrofit	Safety & Personal Security	3.7
1	Greville Road Nth Bd Off-Ramp Left Turn Slip Lane	Safety & Personal Security	0.1
16	Taupaki Road / Old North Road Intersection Upgrade	Safety & Personal Security	0.1
1	WaybyValley Road Intersection	Safety & Personal Security	0.1
1	Orewa Township Upgrade	Safety & Personal Security	\$
1	McKinney Road Intersection Improvements	Safety & Personal Security	\$
1	Greville Road Nth Bd Off-Ramp Left Turn Slip Lane	Safety & Personal Security	\$
1	Drury Interchange Traffic Signals	Economic Development	\$
22	Mercer to Oira Lighting Improvement	Safety & Personal Security	\$
1	Ellerslie Panmure Roundabout Traffic Signals	Economic Development	\$
16	Taupaki Road / Old North Road Intersection Upgrade	Safety & Personal Security	\$
22	Glenbrook Road Intersection Improvement	Safety & Personal Security	\$
1	WaybyValley Road Intersection	Safety & Personal Security	\$
16	Don Buck Road to Huapai Lighting Improvement	Safety & Personal Security	\$

§ in conjunction with third party contributions outside NLTP funding

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	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			

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AUCKLAND State Highway Plan and Forecast for 2008/09 to 2017/18

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SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$ 100+M
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















SMALL & MEDIUM PROJECTS (continued)








			Total Phase Cost
I	Falls Bridge to Waitare Bridge Safety Improvement	Safety & Personal Security	\$
Var	Lighting Safety Retrofit (SH1, 16 and 17)	Safety & Personal Security	\$
I7	The Avenue Intersection Improvement	Safety & Personal Security	\$
20	Southwestern Motorway Lighting Safety Retrofit	Safety & Personal Security	\$
I	HBTC – Lane Light Trial Stage 2	Safety & Personal Security	\$
I7	Coatesville Riverhead Intersection Traffic Signals	Safety & Personal Security	\$
22	South of Crown Road Lighting	Safety & Personal Security	\$
I	Mill Road to SH1/2 Interchange Lighting Improvements	Safety & Personal Security	\$
I6	Muriwai Road Intersection Improvement	Safety & Personal Security	\$

Passing Lanes

I	Te Hana Rail O/B Nth Bd PL	Safety & Personal Security	0.1
I	Toovey Road Sth Bd PL	Safety & Personal Security	0.1
I	Sheepworld Sth Bd PL	Safety & Personal Security	0.1
I	Waitaraire Sth Bd PL	Safety & Personal Security	0.1
I	Hotoe River Nth Bd PL	Safety & Personal Security	0.7
I	Te Hana Rail O/B Nth Bd PL	Safety & Personal Security	\$
I	Toovey Road Sth Bd PL	Safety & Personal Security	\$

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Land Transport Programme 08/09	Plan 09/10–10/11	Forecast 11/12–17/18
		
		
		
		
		
		
		
		
		

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AUCKLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

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	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining
			\$ < 5M \$\$\$ 20-100M \$\$\$\$ 5-20M \$\$\$\$\$ 100+M

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
Passing Lanes (continued)			
I	Sheepworld Sth Bd PL		
I6	Kumeu No.2 Bridge West Bd PL		
I	Mangawhai Road Sth Bd PL		
I	Waitaraire Sth Bd PL		
I6	Wharehine Road Realignment & Nth Bd PL		

Stock Effluent Disposal Facilities

I	Wellsford SEDF		0.5
I	Bombay Hills (Mercer) SEDF		\$

Walking & Cycling

I6	Westgate Pedestrian Facility		\$
20	Old Mangere Bridge Walking and Cycling		\$

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AUCKLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

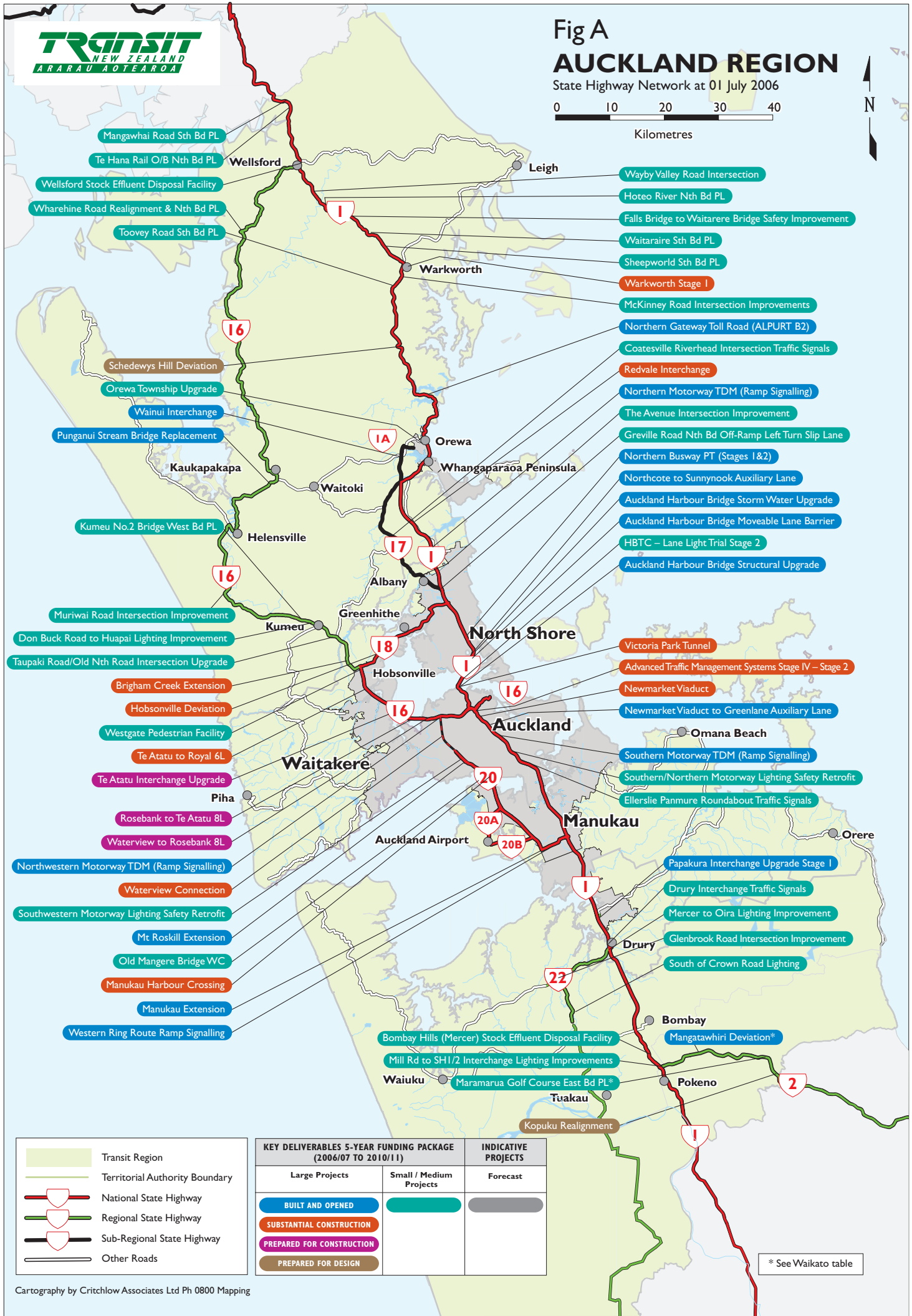
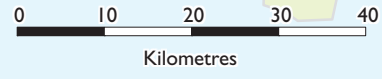
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SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
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Strategic Studies

- SH22 Strategic Study Review
- Whau River Crossing
- SH1 Waitemata Harbour Crossing
- SH20A & SH20B Airport Access
- Managed Priority Lanes for HOV and Freight
- Albany Centre Land Use Transportation Study
- Auckland State Highway
- SH18 Upper Harbour Corridor – Phase 2
- Northern Busway extension to Orewa
- Auckland State Highway Walking and Cycling Strategy
- Kumeu Town Centre Transportation Study
- SH1 Southern Motorway (Southern Sector) Upgrade Strategic Study
- SH18TDM Study
- Southwestern Corridor to East Tamaki Strategic Study

State Highway Network at 01 July 2006



- Mangawhai Road Sth Bd PL
- Te Hana Rail O/B Nth Bd PL
- Wellsford Stock Effluent Disposal Facility
- Wharehine Road Realignment & Nth Bd PL
- Toovey Road Sth Bd PL
- Schedewys Hill Deviation
- Orewa Township Upgrade
- Wainui Interchange
- Punganui Stream Bridge Replacement
- Kumeu No.2 Bridge West Bd PL
- Muriwai Road Intersection Improvement
- Don Buck Road to Huapai Lighting Improvement
- Taupaki Road/Old Nth Road Intersection Upgrade
- Brigham Creek Extension
- Hobsonville Deviation
- Westgate Pedestrian Facility
- Te Atatu to Royal 6L
- Te Atatu Interchange Upgrade
- Rosebank to Te Atatu 8L
- Waterview to Rosebank 8L
- Northwestern Motorway TDM (Ramp Signalling)
- Waterview Connection
- Southwestern Motorway Lighting Safety Retrofit
- Mt Roskill Extension
- Old Mangere Bridge WC
- Manukau Harbour Crossing
- Manukau Extension
- Western Ring Route Ramp Signalling
- Wayby Valley Road Intersection
- Hoteo River Nth Bd PL
- Falls Bridge to Waitarere Bridge Safety Improvement
- Waitaraire Sth Bd PL
- Sheepworld Sth Bd PL
- Warkworth Stage 1
- McKinney Road Intersection Improvements
- Northern Gateway Toll Road (ALPURT B2)
- Coatesville Riverhead Intersection Traffic Signals
- Redvale Interchange
- Northern Motorway TDM (Ramp Signalling)
- The Avenue Intersection Improvement
- Greville Road Nth Bd Off-Ramp Left-Turn Slip Lane
- Northern Busway PT (Stages 1&2)
- Northcote to Sunnynook Auxiliary Lane
- Auckland Harbour Bridge Storm Water Upgrade
- Auckland Harbour Bridge Moveable Lane Barrier
- HBTC - Lane Light Trial Stage 2
- Auckland Harbour Bridge Structural Upgrade
- Victoria Park Tunnel
- Advanced Traffic Management Systems Stage IV - Stage 2
- Newmarket Viaduct
- Newmarket Viaduct to Greenlane Auxiliary Lane
- Omana Beach
- Southern Motorway TDM (Ramp Signalling)
- Southern/Northern Motorway Lighting Safety Retrofit
- Ellerslie Panmure Roundabout Traffic Signals
- Papakura Interchange Upgrade Stage 1
- Drury Interchange Traffic Signals
- Mercer to Oira Lighting Improvement
- Glenbrook Road Intersection Improvement
- South of Crown Road Lighting
- Bombay Hills (Mercer) Stock Effluent Disposal Facility
- Mill Rd to SH1/2 Interchange Lighting Improvements
- Maramarua Golf Course East Bd PL*
- Kopuku Realignment
- Mangatawhiri Deviation*

	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads

KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast

* See Waikato table



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Waikato region include:

- › Road safety, in particular the Waikato state highway network which has the highest fatal crash densities in the country, 20 percent higher than any other region. It has 20 of the nation's 100 worst "black routes", with a high frequency of serious and fatal crashes
- › Long-haul routes, the Waikato Region being part of a growth triangle linking major export hubs, population centres and tourist attractions in Auckland, Waikato, and the Bay of Plenty. In addition, a number of the country's strategic corridors with high proportions of heavy vehicles passing through the Waikato linking south to Taranaki and Wellington, contributing to a complex mix of local, inter-regional and tourist traffic
- › Congestion and bottle necks, because of rapid population and development growth in and around Hamilton, and to a lesser extent Cambridge and Taupo, are causing congestion and increasing travel delays and transport costs for long-haul travellers. It is causing a deterioration of environmental and amenity values for the communities that these long-haul routes pass through
- › Large volumes of vehicles are diverting onto unsuitable alternative routes to avoid delays, with resultant impacts on safety and economic development
- › Increased forestry traffic, over the next five to 10 years with forestry harvesting expected to increase from 10 to 11 million tonnes from Central Plateau forests, much of the product being exported through the Port of Tauranga
- › Significant pressure for commercial access and growth in northern and western Hamilton. Hamilton's Rotokauri Structure Plan and Waikato District's Horotiu Structure plan will put significant pressure on the Hamilton Western Corridor, which also has a local road function. Transit will work closely with its transport partners to build on the Access Hamilton Strategy, which seeks a balance

between roading, rail, passenger transport, and active modes of transport such as walking and cycling to manage demand

- › Tourist traffic, particularly in Taupo and on the Coromandel Peninsula (where the number of domestic holidaymakers is also a significant issue), and on the routes linking Auckland, Waitomo Caves, Lake Taupo, and Rotorua
- › Flooding on the Thames Coast highway and interruption of the state highway network because of bad weather and slips, particularly on the SH1 Desert Road and on SH3 through the Awakino Gorge, has a significant economic impact nationally as well as on the Taranaki region and the local communities
- › Spillages from stock trucks remain a significant environmental and safety hazard.

How we plan to address these key issues

The Waikato Expressway continues to be the highest priority transport issue for the region. Further progress will be made on the remaining components over the next 10 years. This will, in time, reinforce SH1 as a preferred long haul route, together with SH29 between the Bay of Plenty and Auckland. The SH2 Maramarua Corridor and SH27 are expected to remain as attractive routes for long-haul traffic in the short to medium term.

Further improvements are proposed to the Hamilton Western Corridor to complement the works already in progress. Improvements will include the identification and protection of the strategic transport corridors in South Hamilton through the planning process. Transit will also consider a number of projects on the existing routes in the meantime to relieve congestion and improve efficiency.

Transit is also considering improvements to route security for the region on the Thames Coast and on SH3 between Taranaki and the Waikato.

A number of walking and cycling activities are also planned to complement the strategies and work of the various territorial authorities.

Studies are currently underway to look at increasing safety on the “black routes” and will continue in the coming year. These have identified a number of small and medium-sized safety improvement projects which are included in the plan.

Congestion and Strategic Corridor Improvements

Transit expects to design and commence construction of the Rangiriri Bypass within five years as well as making significant progress with the Cambridge and Ngaruawahia Bypasses within 10 years. The detailed design of the Rangiriri, Ngaruawahia and Cambridge Bypasses are already underway and we are planning to progress the Longswamp to Te Kauwhata section and the Huntly and Hamilton Bypasses in the coming year. The region has expressed a preference to develop the Hamilton Bypass ahead of the Huntly Bypass. Transit will continue working with the region to develop a funding plan, which will consider tolling opportunities.

Construction of the Church to Avalon four-lane project is now complete and construction of the Avalon Drive Bypass project is well advanced.

Construction of the Te Rapa Bypass will commence in 2010/11 subject to completion of the planning and land purchase requirements and subject to the agreement of a funding package with Hamilton City Council.

The strategic routes for the Southern Links project in the south Hamilton area will also be identified and designated within five years. A number of small intersection improvement projects are also proposed for Hamilton City, to relieve congestion and improve the efficiency of the existing network in the meantime.

The design of a two-lane replacement for the single lane Kopu Bridge is substantially complete and its construction will be progressed to assist with the high volumes of traffic visiting the Coromandel Peninsula, particularly on weekends and public holidays.

A number of strategic studies will be undertaken to determine strategies for a number of other corridors in the Waikato.

Safety

The Maramarua Deviation was designated in 2005/06, the design is now underway and construction is expected to start in 2010/11. This will complement the Mangatawhiri Deviation, currently under construction. In addition investigation work has now commenced on the Kopuku Road section of the highway.

A number of small safety projects will be constructed in the next five years, together with the continued “black route” safety work (including removal of roadside hazards). The SWATT (South Waikato and Taupo Target 2010) project between Tokoroa and Taupo is now substantially complete and further work is proposed on a number of sites around the Waikato including:

- › Hamilton North Safety Improvements
- › Hamilton Urban Safety Improvements
- › SH27 Safety Improvements
- › SH39 Safety Improvements
- › South of Hamilton Safety Improvements

Route Security and Availability

A number of bridge upgrades and replacements are programmed on SH25 and SH26 north and south of Thames as part of Project Peninsula, a multi-agency flood protection package. Construction is underway on replacement bridges on SH25 at Te Puru and Tararu. Investigation is continuing for the Kirikiri Stream Bridge on SH26 and will commence on the SH25 bridge at Waiomu.

The Taranaki and Waikato regions have agreed to share the cost of investigations in the Awakino Gorge. The Awakino North Realignment on SH3 has now been completed.

Construction of the Waikato Road Information Project on SH1 and 2 is continuing while further investigation will be undertaken into a road information project for the Coromandel Peninsula.

Passing Opportunities

Five new passing lanes have been completed during the year on SH1, SH2, SH3 and SH25A. A further four are either underway or programmed for construction in the coming year, three of these are on SH1 between Tokoroa and Taupo and one on SH3 south of Te Kuiti.

A number of other passing lanes are included in the programme for either investigation or design.

Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, investigation will continue into new facilities on SH1 at Putaruru and on SH3 at Te Kuiti.

Walking and Cycling

Improvements for walking and cycling are proposed in Hamilton City, Cambridge, Turangi and Te Awamutu.

Transit proposes to work in partnership with Hamilton City Council to jointly implement improvements to pedestrian facilities across SH1 Cobham Drive to the Hamilton City Gardens.

Strategic Studies

Transit proposes to undertake a number of strategic studies to improve our long-term planning and assist good decision-making, together with studies that lead to sustainable environmental outcomes.

These studies include a Lake Taupo Stormwater Runoff Environmental Scoping Study and corridor studies of SH2/SH29 Pokeno to Hairini (Inter-Regional Strategic Study), and Greater Hamilton State Highway Walking and Cycling Strategy.







Maintenance and Operations































Maintenance activities make up a large proportion of the forecast expenditure in the Waikato region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake 236km of resurfacing, including 25km with low noise surfacing
- › Strengthen 55km of highway
- › Continue improving techniques to manage highways in winter
- › Target noise reduction works for specific problem areas
- › Improve traffic and travel demand management in East Waikato and the Coromandel by upgrading signals and electronic variable message signs to provide real time information for road users in Hamilton
- › Implement plant pest strategies and use special plant pest eradication programmes to target hotspots
- › Implement planting to reduce future maintenance on steep slopes or batters next to highways
- › Continue to implement and maintain special safety programmes (including speed-activated electronic signs) in areas or corridors with poor road safety records, including identified “black routes”
- › Introduce thermal mapping of the inland network to better predict where ice will occur.

WAIKATO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction







SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
2	Mangatawhiri Deviation *	Safety & Personal Security	12.0			
1	Avalon Drive Bypass	Access and Mobility	9.3			
1	Piarere – Oak Tree Bend Realignment	Safety & Personal Security	12.7			
25	Kopu Bridge Replacement	Economic Development	1.4			
2	Maramarua Deviation	Safety & Personal Security	3.3			
1	Te Rapa Bypass	Economic Development	0.3			
1	Ngaruawahia Bypass	Access and Mobility	5.8			
1	Cambridge Bypass 2L	Access and Mobility	3.3			
1	Rangiriri Bypass	Access and Mobility	2.6			
25	Kopu Bridge Replacement	Economic Development	\$\$			
2	Maramarua Deviation	Safety & Personal Security	\$\$\$			
1/3	Hamilton Southern Links	Access and Mobility	\$\$\$\$			
1	Te Rapa Bypass	Economic Development	\$\$\$\$			
1	Huntly Bypass	Access and Mobility	\$\$\$\$			
1	Ngaruawahia Bypass	Access and Mobility	\$\$\$\$			
1	Hamilton Bypass	Access and Mobility	\$\$\$\$			
1	Cambridge Bypass 2L	Access and Mobility	\$\$\$			
1	Rangiriri Bypass	Access and Mobility	\$\$\$			
1	Long Swamp to Rangiriri 4L	Access and Mobility	\$\$\$			

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WAIKATO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ \$ 5-20M \$\$\$ \$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
SMALL & MEDIUM PROJECTS						
			Total Phase Cost			
1	SWATT 2010 Stage 2 Tokoroa to Taupo	Safety & Personal Security	0.5			
2	Maramarua Expressway Safety Improvement	Safety & Personal Security	0.5			
27	SH27 North Safety Improvements	Safety & Personal Security	1.3			
25	Te Puru Stream Bridge Replacement	Economic Development	4.6			
25	Tararu Stream Bridge Replacement	Economic Development	4.1			
VAR	Waikato Road Information System	Economic Development	0.5			
1	Hamilton North Safety Improvements	Safety & Personal Security	0.1			
1	Hamilton Urban Safety Improvements	Safety & Personal Security	0.1			
39	SH39 Safety Improvements	Safety & Personal Security	0.1			
3	Safety Improvements SH3 Hamilton to Airport Road	Safety & Personal Security	0.1			
27	Tahuna Road Roundabout	Safety & Personal Security	0.1			
26	SH26/27 Intersection Improvement	Safety & Personal Security	0.1			
1	Gallagher Road Intersection Improvement	Access and Mobility	0.1			
3	Awakino North Realignment	Access and Mobility	1.1			
1/23	Hamilton City Busbays	Safety & Personal Security	0.2			
26	Kirikiri Stream Bridge Replacement	Economic Development	\$			
25	Coromandel Road Information System	Access and Mobility	\$			
1	Hamilton North Safety Improvements	Safety & Personal Security	\$			
1	Hamilton Urban Safety Improvements	Safety & Personal Security	\$			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WAIKATO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction




SH	Project	Primary LTMA Objective	Estimated Cost Remaining	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
				Total Phase Cost		
SMALL & MEDIUM PROJECTS (continued)						
27	SH27 South Safety Improvements	Safety & Personal Security	\$			
39	SH39 Safety Improvements	Safety & Personal Security	\$			
1	Piarere Junction Safety Improvement	Safety & Personal Security	\$			
1	Hillcrest & Morrinsville Road Intersection Improvement	Economic Development	\$			
39	Kiwi Road Realignment	Safety & Personal Security	\$			
3	Safety Improvements SH3 Hamilton to Airport Road	Safety & Personal Security	\$			
27	Tahuna Road Roundabout	Safety & Personal Security	\$			
3	Waitomo Road / SH3 Intersection Safety Improvements	Safety & Personal Security	\$			
1	Matarawa Bridge Widening	Safety & Personal Security	\$			
1	Ohaupo / Kahikatea Intersection Improvement	Economic Development	\$			
1	Greenwood / Killarney Intersection Improvement	Safety & Personal Security	\$			
2	Waimata Realignment	Safety & Personal Security	\$			
26	SH26/27 Intersection Improvement	Safety & Personal Security	\$			
1	Gallagher Road Intersection Improvement	Access and Mobility	\$			
25	Waioamu Stream Bridge Flood Protection	Safety & Personal Security	\$			
31	Tihiroa East Realignment	Safety & Personal Security	\$			
25	Three Kings Corner Realignment	Safety & Personal Security	\$			
25	Te Ramarama Bridge Replacement	Safety & Personal Security	\$			

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WAIKATO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining
			\$ < 5M \$\$\$ 20-100M \$\$\$ 5-20M \$\$\$ 100+M


























SMALL & MEDIUM PROJECTS (continued)

			Total Phase Cost
25	Pepe Stream Bridge Replacement	Safety & Personal Security	\$
39	Limmer Road Realignment	Safety & Personal Security	\$
I	Tirau SH 1/5 Realignment	Safety & Personal Security	\$
39	Laxon Road Realignment	Safety & Personal Security	\$
5	Tar Pot Curve Realignment	Safety & Personal Security	\$

Passing Lanes

I	Hatu Patu PL	Safety & Personal Security	0.6
25A	One Ton West PL	Safety & Personal Security	0.2
I	Lichfield South PL	Safety & Personal Security	0.8
25A	Piranui Saddle Short PL	Safety & Personal Security	0.1
I	Tutukau Road North PL	Safety & Personal Security	0.4
25A	4th Branch SVB	Safety & Personal Security	0.1
I	Rangipo Nth Bd PL	Safety & Personal Security	\$
I	James Farm South PL	Safety & Personal Security	\$
25A	4th Branch SVB	Safety & Personal Security	\$
25A	Frenchmans Gap SVB	Safety & Personal Security	\$
25A	Kirikiri Valley PL	Safety & Personal Security	\$
5	Rangitaiki Nth Bd PL	Safety & Personal Security	\$

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WAIKATO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
Passing Lanes (continued)						
			Total Phase Cost			
5	Rangitaiki Sth Bd PL	Safety & Personal Security	\$			
2	Maramarua Golf Course East Bd PL*	Safety & Personal Security	\$			
5	Galaxy Road Sth Bd PL	Safety & Personal Security	\$			
39	Ngahinapouri Sth Bd PL	Safety & Personal Security	\$			
3	Taylor's Hill Nth Bd PL Extension	Safety & Personal Security	\$			
2	Mangatarata Double PL	Safety & Personal Security	\$			
5	Kaingaroa Forest Sth Bd PL	Safety & Personal Security	\$			
1	Motuouapa Sth Bd PL	Safety & Personal Security	\$			
1	Pat's Corner SVB	Safety & Personal Security	\$			
1	Tirau South PL	Safety & Personal Security	\$			
1	Fletcher Road PL Extension	Safety & Personal Security	\$			
1	Waipakihi Road Sth Bd PL	Safety & Personal Security	\$			
1	Five Mile Bay PL	Safety & Personal Security	\$			
3	Blackett Road Nth Bd PL Extension	Safety & Personal Security	\$			
5	Hetherington Road Sth Bd PL	Safety & Personal Security	\$			
1	Ngutuwera Bridge Nth Bd PL	Safety & Personal Security	\$			
1	Walnut Road PL	Safety & Personal Security	\$			
1	Tutukau South PL Extension	Safety & Personal Security	\$			
1	Rangipo SVB	Safety & Personal Security	\$			













* refer to Auckland map
Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WAIKATO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
Passing Lanes (continued)						
1	Rotopua PL	Safety & Personal Security	\$			
1	Maungaiti Hill Sth Bd PL Extension	Safety & Personal Security	\$			
1	Tokoroa Golf Course Sth Bd PL	Safety & Personal Security	\$			
3	McFalls Quarry PL	Safety & Personal Security	\$			
Stock Effluent Disposal Facilities						
3	Te Kuiti SEDF	Environmental Sustainability	\$			
1	Putaruru SEDF	Environmental Sustainability	\$			
Walking & Cycling						
1	Avalon Drive Cycleway	Public Health	\$			
23	Massey Street Cycle Lane	Public Health	\$			
3	Mangapiko Bridge Footpath Widening	Public Health	\$			
1	Tongariro Bridge Walk / Cycle Retrofit	Public Health	\$			
1	Cobham Drive Pedestrian Facility	Public Health	\$			
3	Te Awamutu Pedestrian Facilities	Public Health	\$			
1	Karapiro Stream and Pedestrian and Cycle Facilities	Public Health	\$			
1	Kahikatea Drive Pedestrian Facilities	Public Health	\$			
3	Ohaupo Road Pedestrian Facilities	Public Health	\$			
1	Te Rapa – Wintec Pedestrian and Cycle Facilities	Public Health	\$			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WAIKATO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M
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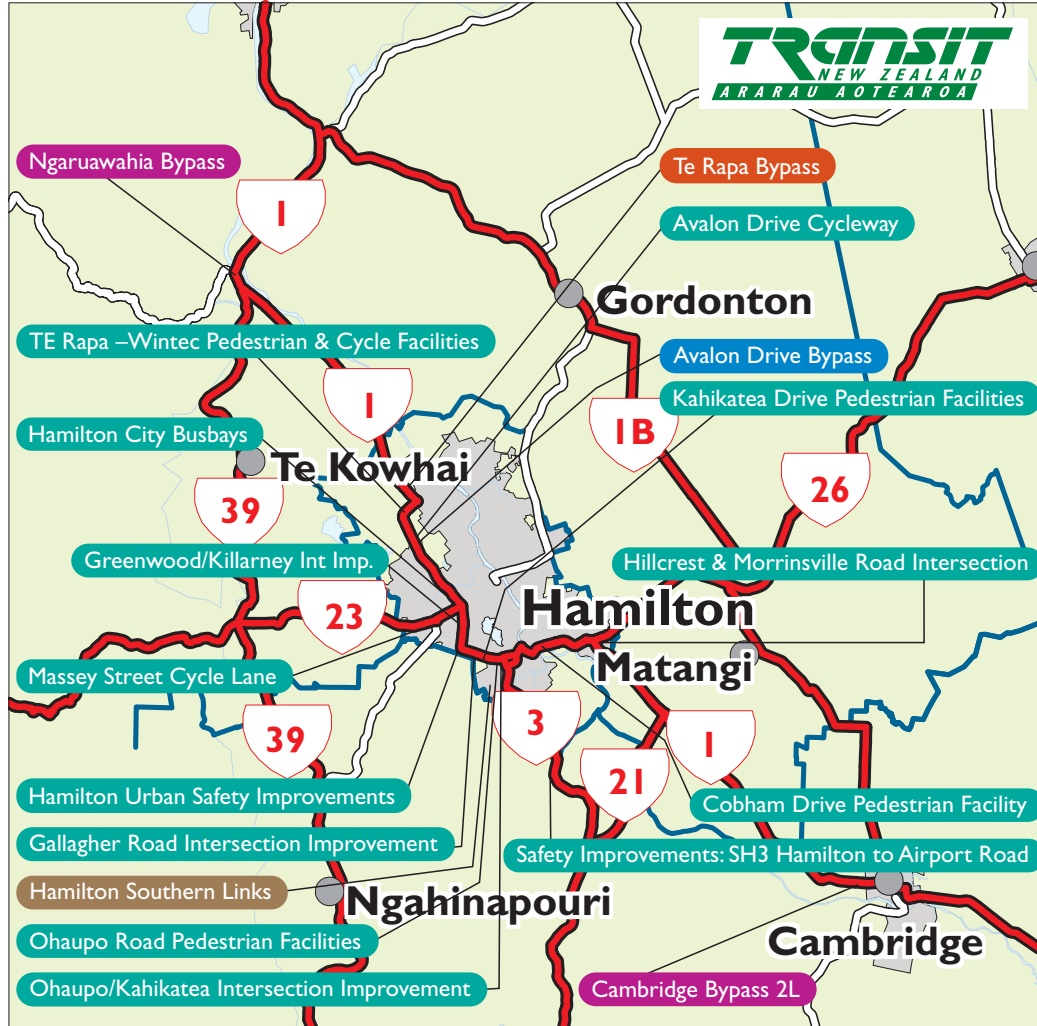
Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
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Strategic Studies

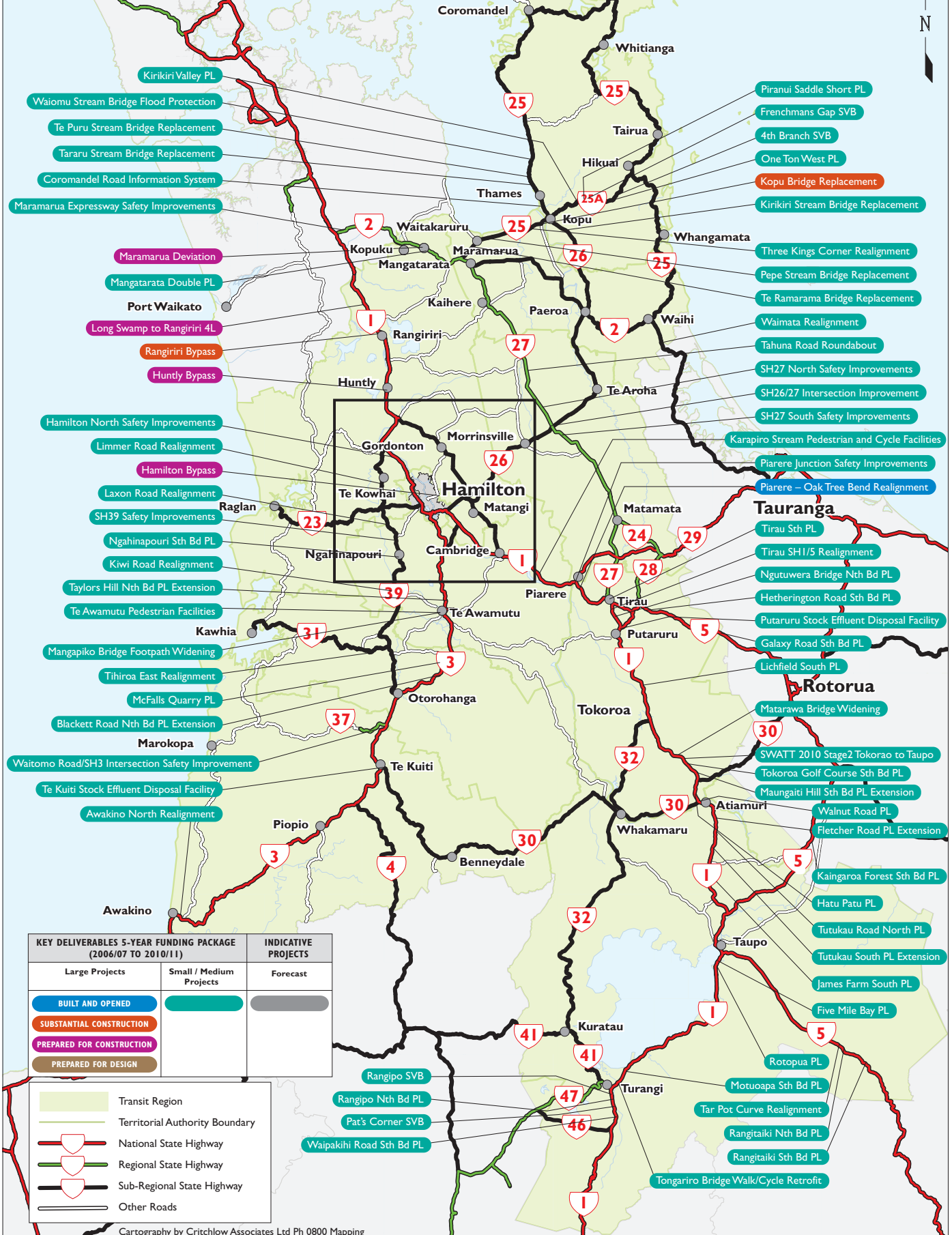
- Greater Hamilton W & C Strategic Study
- Waikato Regional Transportation Model
- Waikato Regional State Highway Strategy
- Awakino Gorge Strategic Study
- SH2/29 Inter-Regional Strategic Study
- Lake Taupo Storm Water Runoff
- Waikato Passing Opportunities Plan
- Hamilton Northern Growth Corridor Study

Fig WK Inset
WAIKATO REGION – Inset Map

State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED	SUBSTANTIAL CONSTRUCTION	PREPARED FOR CONSTRUCTION
PREPARED FOR DESIGN		

- Transit Region
- Territorial Authority Boundary
- National State Highway
- Regional State Highway
- Sub-Regional State Highway
- Other Roads



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Bay of Plenty region include:

- › Road safety, particularly safe interaction of heavy freight traffic with general traffic, and tourist traffic
- › Congestion and safety problems caused by rapid population and development growth in the Bay of Plenty, particularly in the western Bay of Plenty sub-region in and around Tauranga
- › Increased forestry traffic over the next five to 10 years, with forestry harvesting expected to increase from 10 to 11 million tonnes a year from the Central Plateau forests, much of the product being exported through the Port of Tauranga
- › Tourist traffic, particularly around Rotorua
- › Interruption of the state highway network by flooding and slips, particularly in the eastern Bay of Plenty between the East Cape (Gisborne), Opotiki district and Whakatane district, has a significant economic impact on the forestry and dairy industries, as well as on local communities
- › Spillages from stock trucks

How we plan to address these key issues

The Tauranga Central Corridor is one of the most congested corridors in the region's state highway network and substantial improvements are planned.

The Tauranga Eastern Corridor is also congested and will be put under further pressure by substantial growth planned for Papamoa. Transit is working with its Smart Transport partners (Tauranga City Council, Western Bay of Plenty District Council and Environment Bay of Plenty) to develop the corridor in a manner that integrates the proposed land use with transport systems to achieve a sustainable balance.

Progress will be made towards determining strategies for the remaining strategic corridors in the Bay of Plenty. The integrated land use and transport strategic study for the Tauranga Northern Corridor is underway and will take into account the review of the long-term function of the highway. This will define appropriate standards for design of the Tauranga Northern Arterial.

Several small projects under maintenance and operations are targeted at improving route security in the eastern Bay of Plenty, particularly in Matata where Transit is working closely with Whakatane District Council, Environment Bay of Plenty and ONTRACK to address the severe flooding risk.

Congestion and Strategic Corridor Improvements

Transit is continuing to progress the Harbour Link Project with Stage 1, the four-laning of Hewletts Road, now complete. Construction is well underway on Stage 2, the duplication of the existing Harbour Bridge and the construction of a four-lane flyover from the bridge to Takitimu Drive. The objectives are to increase road capacity and to provide bus lanes and walking and cycling facilities to encourage use of these modes of transport.

A range of Travel Demand Management initiatives, including bus priority measures, cycle lanes and pedestrian paths, have been identified for the SH2, Turret Road/15th Avenue corridor in partnership with Tauranga City Council to complement signals at the Welcome Bay/Mangatapu roundabouts. Transit is continuing the investigation and design of this work.

The design of the Tauranga Eastern Motorway has commenced. Transit is continuing with obtaining resource consents and land purchase. We will work with our Smart Transport partners to ensure the motorway is fully integrated with other transport activities and complements the proposed land use changes. The Smart Transport partners, led by the Regional Land Transport Committee, are developing a joint funding package.

Investigative work for the Katikati Bypass is underway and we will consider updating the designation to ensure it is suitable for a future alternative route for SH2 through Katikati compatible with future land use and with intersection and safety improvements.

Investigation of Omokoroa intersection has commenced to provide for growth on Omokoroa Peninsula.

Transit continues to work with Tauranga City Council and the developers at Pyes Pa to complete the remaining stages of Pyes Pa Bypass. Stage 1 was completed in 2005/06 by the developer, enabling works are currently underway and, subject to funding approvals, a contract for the final construction stage will be awarded in 2009 for completion early 2011.

Safety

The widening of two bridges on SH36 Rotorua/ Tauranga Twin City Corridor is being undertaken.

Transit is also planning to progress additional small projects, including bridge and seal widening, and intersection improvements.

Route Security

Works are continuing on SH2 near Matata as part of an integrated package of flood protection works.

Passing Opportunities

Transit will continue investigation and design of passing lanes north of Katikati on SH2 and on SH5 north and south of Rotorua. Passing lanes are also proposed for SH30 and SH33 and a slow vehicle bay for SH30.

Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, investigation will continue on identifying an appropriate site for a new facility on SH29 to address the issue of effluent spills on the Kaimai Ranges.

Walking and Cycling

Four walking and cycling projects are proposed in greater Tauranga and Rotorua.

Strategic Studies

Transit proposes a number of strategic studies to improve our long-term planning and assist good decision-making, including the Rotorua Central, Eastern Bay of Plenty Route Security and a strategic study of SH29.

The Rotorua strategic study will consider, in particular, the form and function of the proposed Rotorua Eastern Arterial, its cost and risk.

Maintenance and Operations
























Maintenance and operations activities make up a key part of the forecast expenditure in the Bay of Plenty region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake 80km of resurfacing, including 9km with low noise surfacing
- › Strengthen 18km of highway
- › Improve route security in the eastern Bay of Plenty to safeguard the state highway from flooding and land instability
- › Target noise reduction works for specific problem areas
- › Improve traffic and travel demand management by upgrading signals and electronic variable message signs to provide real time information for road users in Tauranga and Rotorua
- › Implement plant pest strategies and use special eradication programmes to target hotspots
- › Carry out planting to reduce future maintenance on steep slopes or batters next to highways
- › Continue to implement and maintain special safety programmes in areas with poor road safety records, including identified “black routes”.

BAY OF PLENTY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining			Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			\$ < 5M	\$\$\$ 20-100M	\$\$\$ 100+M			
LARGE PROJECTS								
2A	Harbour Link	Economic Development		126.2				
36	Pyes Pa Bypass § ①	Access and Mobility	5.2					
2/29	Tauranga Central Corridor Improvements	Economic Development	0.7					
2	Tauranga Eastern Motorway §	Access and Mobility	6.3					
2	Omokoroa Roundabout §	Access and Mobility	0.3					
2	Katikati Bypass	Access and Mobility	0.5					
2/29	Tauranga Central Corridor Improvements	Economic Development	\$					
2	Tauranga Eastern Motorway §	Access and Mobility	\$\$\$					
2	Tauranga Northern Arterial	Access and Mobility	\$\$\$					
2	Katikati Bypass	Access and Mobility	\$					
SMALL & MEDIUM PROJECTS								
			Total Phase Cost					
2	Awaiti Intersection Improvements	Safety & Personal Security	0.1					
36	Hamurana to Te Waerenga Road Seal Widening	Safety & Personal Security	1.1					
2	Reids Canal Bridge Replacement	Environmental Sustainability	0.1					
36	Hamurana Rd / Tauranga Direct Rd Intersection Improvement	Safety & Personal Security	0.1					
36	Mangapouri Bridge Widening	Safety & Personal Security	0.1					

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

§ in conjunction with third party contributions outside NLTP funding
 ① enabling construction committed

BAY OF PLENTY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			\$ < 5M \$\$\$ 20-100M \$\$\$\$ 100+M			
SMALL & MEDIUM PROJECTS (continued)						
			Total Phase Cost			
2	Matata Underpass Realignment	Safety & Personal Security	0.6			
2	Wharawhara Road Roundabout	Economic Development	0.2			
29	Soldiers Road Realignment + Intersection Improvement	Safety & Personal Security	0.1			
2	Waikahanui Bridge Replacement	Safety & Personal Security	0.1			
2	Marshall Road Traffic Signals	Economic Development	0.1			
2	Bethlehem Township 4L	Safety & Personal Security	0.1			
2	Awaiti Intersection Improvements	Safety & Personal Security	\$			
2	Reids Canal Bridge Replacement	Environmental Sustainability	\$			
36	Hamurana Rd / Tauranga Direct Rd Intersection Improvement	Safety & Personal Security	\$			
5	Ngongotaha RAB Tidal Improvement (Lights)	Access & Mobility	\$			
36	Mangorewa Stream North and South Bridge Widening	Safety & Personal Security	\$			
2&29	Welcome Bay & Maungatapu Roundabouts Signalisation	Economic Development	\$			
36	Mangapouri Bridge Widening	Safety & Personal Security	\$			
2	Wharawhara Road Roundabout	Economic Development	\$			
29	Soldiers Road Realignment + Intersection Improvement	Safety & Personal Security	\$			
2	Waikahanui Bridge Replacement	Safety & Personal Security	\$			
36	Waiteti Road Intersection Improvement	Safety & Personal Security	\$			
5	Fairy Springs 4L Stage 2	Safety & Personal Security	\$			
2	Marshall Road Traffic Signals	Economic Development	\$			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

BAY OF PLENTY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work



































	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining
			\$ < 5M \$\$\$ 20-100M \$\$\$ 5-20M \$\$\$ 100+M

SMALL & MEDIUM PROJECTS (continued)

			Total Phase Cost
5	Oturoa Road Intersection Improvement	Safety & Personal Security	\$
33	Sun Valley Realignment	Safety & Personal Security	\$
30	Apirana Curves Realignment	Safety & Personal Security	\$
2	Taneatua Rail Overbridge	Safety & Personal Security	\$
2	Arden Cottage Curves Realignment	Safety & Personal Security	\$
5	Waipa Curve Realignment	Safety & Personal Security	\$
2	SH2 Katikati Urban Safety Improvements	Safety & Personal Security	\$
2	Bethlehem Township 4L	Safety & Personal Security	\$
5	Passing Lanes		
	Maraeroa PL	Safety & Personal Security	0.1
5	Maraeroa PL	Safety & Personal Security	\$
2	Kauri Point PL	Safety & Personal Security	\$
33	Banksia Road PL	Safety & Personal Security	\$
5	Five Mile Gate PL	Safety & Personal Security	\$
2	Kopuroa PL	Safety & Personal Security	\$
30	Rotoma Bluff Slow Vehicle Bay	Safety & Personal Security	\$
2	Tuapiro Road PL	Safety & Personal Security	\$
2	Bridgeman Lane PL	Safety & Personal Security	\$

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			
			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

BAY OF PLENTY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M
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The grey symbols show indicative timings given that the investigation or design phase has not been completed.

	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18

Total Phase Cost

30	Rotoma Hills PL	Safety & Personal Security	\$
2	Worsley Road PL	Safety & Personal Security	\$

Stock Effluent Disposal Facilities

29	SH29 SEDF	Environmental Sustainability	\$
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Walking & Cycling

29	Poike Road Pedestrian & Cycle Facility	Public Health	\$
2	Wairoa Bridge to Bethlehem Safety Improvements	Public Health	\$
2	Te Maunga Pedestrian Strategy Link	Public Health	\$
33	Mourea Bridge Pedestrian Cycleway	Public Health	\$

Strategic Studies

- Rotorua Central, Eastern Lakes, and Southern Corridors
- Tauranga Northern Corridor
- Tauranga South Western Corridor
- Whakatane Transportation Study
- SH2/29 Inter-regional Strategic Study
- Bay of Plenty Passing Opportunities Study
- Eastern Bay of Plenty
- Bay of Plenty Regional State Highway Strategy

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for Gisborne include:

- › Road safety
- › Forestry traffic is expected to remain at current levels of around 800,000 in 2006 and rise to 2.5 to 3.0 million tonnes a year by 2009/10. Harvesting rates are predicted to stay at this level for the next 20 years, and will require a good transportation system
- › Route security and efficiency on SH2, particularly to the north via Waioka Gorge and to the south via Matahorua Gorge, and on SH35 along the Waiapu River
- › Tourist traffic.

How we plan to address these key issues

State Highway 2 in the Gisborne region runs through a variety of terrain, including plains, coastal sections and river gorges in mountainous country. Terrain around SH35 is also varied, comprising a narrow coastal margin of rocky bays and headlands on the north coast and a mixture of this and largely pastoral hill country on the east coast.

Land use around SH2 is primarily pastoral farming, horticulture, conservation, recreation activity and exotic forestry. The principal land use around SH35 is dairy and pastoral farming, with small commercial, residential, tourism and fishing activities interspersed along the highway.

The two main shipping ports for the region are in Napier and Gisborne and the linkage between the two ports on SH2 is strategically important. Although a smaller port, Gisborne has a throughput of 500,000 tonnes a year, consisting primarily of logs for export.

A small rural realignment project is planned for SH2. On SH35 seal widening and two slow vehicle bays are planned.

Road Safety – Secure and Efficient Transport Corridors

Transit plans to continue improving the safety and efficiency of state highways. One large and a number of medium and smaller activities have been proposed, including a programme of seal widening on SH35 that will be staged and consist largely of projects north and south of Tolaga Bay. Further work on the management or removal of roadside hazards will continue.

Stock Effluent

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, Transit intends to review the North Island stock effluent strategy to identify an appropriate site for the Gisborne region.

Passing Opportunities

The alignment of SH35 north of Gisborne restricts opportunities for passing, leading to driver frustration and accidents. Two slow vehicle bay projects have been identified on SH35 north of Gisborne. The Passing and Overtaking Strategy study on SH2 between Gisborne and Napier has been completed and identifies further improvements that can be made on this route. Work will be undertaken to implement a package of passing opportunity improvements.

Walking and Cycling

The Gisborne Walking and Cycling Strategy has been reviewed by Transit New Zealand. Two walking and cycling projects, Awapuni to McDonald Road and the Gisborne Wainui Cycleway, have been proposed for progress.

Strategic Studies

We are proposing to undertake strategic studies for each of the state highway corridors in the Gisborne region to improve our long-term planning and assist good decision-making.

Maintenance and Operations

Maintenance activities make up a large proportion of the forecast expenditure in the Gisborne region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:



- › Resurface 60km and reconstruct 16km of highway
- › Undertake the first stage of a programme to improve the stability of subsidence sites on SH35 more quickly and reliably
- › Widen the carriageway to target seal widths as part of maintenance activities, when appropriate and affordable
- › Provide a more forgiving roadside environment to reduce the severity of accidents
- › Continue to focus on low skid resistance sites to maintain the standard of surface friction performance
- › Improve safety and prevent road blockages on sections of state highway with a high incidence of rock falls
- › Improve our response to ice and snow prone sections on state highways to reduce winter crash rates
- › Look for opportunities to reduce roadside noise in urban areas
- › Improve roadside drainage facilities
- › Continue to improve traffic management at incidents on the network.

GISBORNE State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining
			\$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M

Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
		

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

LARGE PROJECTS

35 Gisborne – Tolaga Seal Widening Safety & Personal Security \$\$

SMALL & MEDIUM PROJECTS

35 Kopuaroa No.3 Bridge Replacement Safety & Personal Security 0.1

2 Dymock Road Curve Safety & Personal Security 0.4

35 Curve North of Makarika Road Safety & Personal Security \$

35 Kopuaroa No.3 Bridge Replacement Safety & Personal Security \$

35 North Tolaga Seal Widening Safety & Personal Security \$

35 Makokomuku Realignment Safety & Personal Security \$

2 SH2 Pilmer / Farmer Roads Intersection Improvement Safety & Personal Security \$

Passing Lanes

35 Slow Vehicle Bays Stage 1 Safety & Personal Security \$

35 Panikau Hill Slow Vehicle Bays Safety & Personal Security \$

35 Slow Vehicle Bays Stage 2 Safety & Personal Security \$

Stock Effluent Disposal Facilities

2/35 Gisborne SEDF Environmental Sustainability \$

Walking & Cycling

35 Awapuni to McDonald Road Cycleway Public Health \$

35 Gisborne /Wainui Cycleway Public Health \$

Strategic Studies

Region 5 Corridor Management Plan

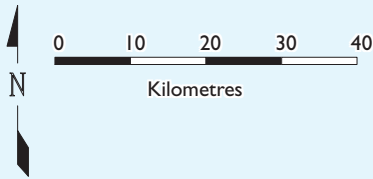
Total Phase Cost

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

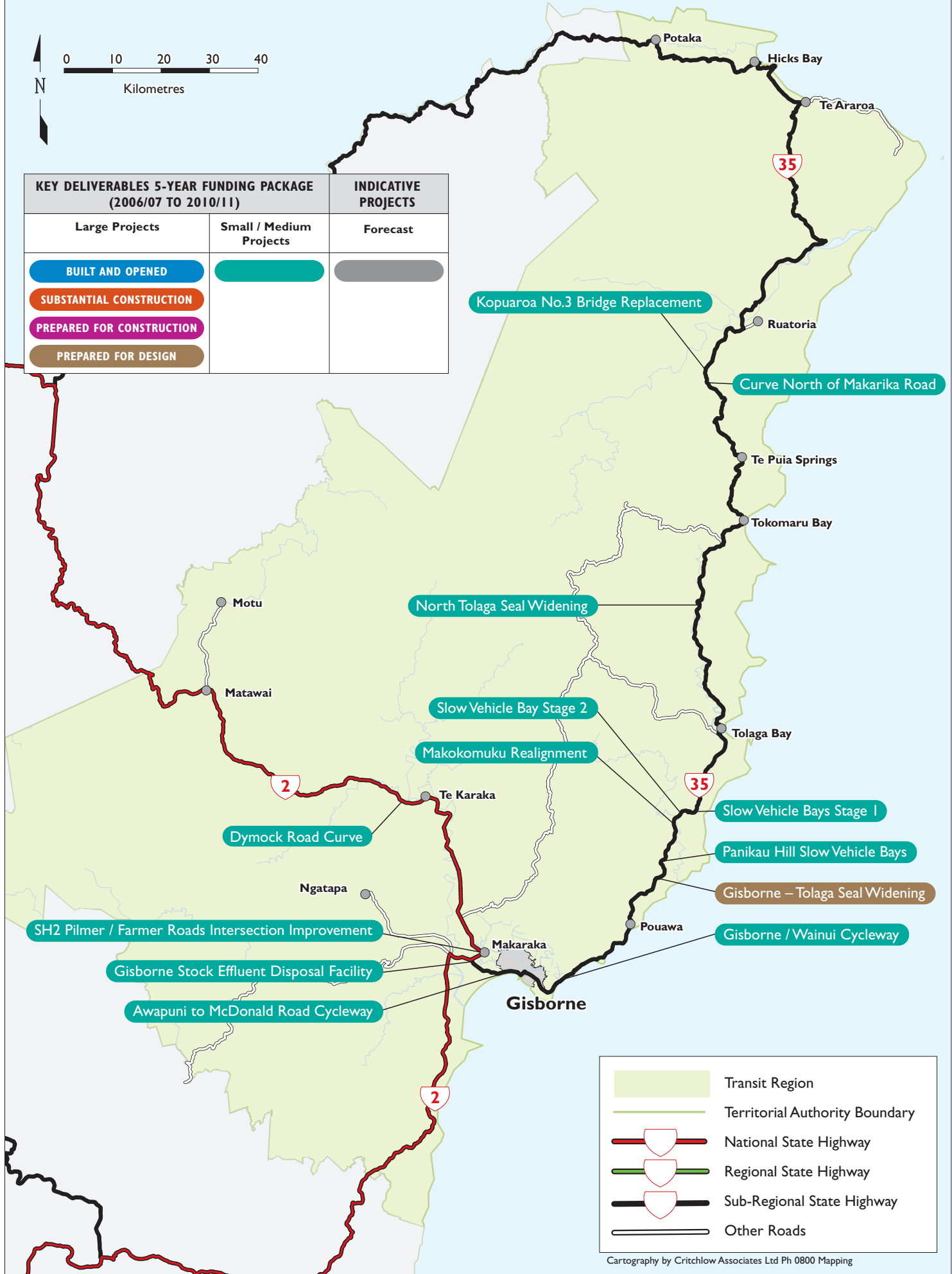
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GISBORNE REGION

State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Hawke's Bay include:

- › Road safety
- › Forestry traffic has been growing but is likely to level off at around 1.6 million tonnes per year, most of which will be exported through the Port of Napier
- › Stone fruit, process cropping, food and wood processing and viticulture industries are growing leading to increasing demands on the road network
- › Access to the Port of Napier
- › Route security and efficiency on SH2 to the north through the Matahorua Gorge
- › Route efficiency to the south and around the Heretaunga Plains
- › Tourist traffic, particularly in Urewera National Park
- › Environmental impacts of major transport routes through urban and suburban areas.

How we plan to address these key issues

The terrain in the Hawke's Bay is variable, with SH2 in the south generally flat from Napier, flat to rolling around Waipukurau, then rising gently up to the Takapau Plains. A number of passing lanes have been constructed to improve efficiency, with 10 others planned and four more proposed.

State Highway 2 north is aligned parallel to the east coast and is generally characterised as a moderate speed route traversing flat, rolling and mountainous terrain, up to a maximum elevation of 500 metres above sea level. The Passing and Overtaking Strategy Study on SH2 between Wairoa and Napier, has now been completed and identifies further improvements that can be made on this route. Work will be undertaken to implement a package of passing opportunity improvements.

State Highway 5, from the SH2 junction to Waipunga (6km north of Tarawera), runs through hilly to rolling country with several steep grades. This section of highway is known to have some areas of instability,

which become evident after prolonged wet weather. Transit will continue to seek engineering solutions to stabilise such areas. Logging traffic to the ports of Napier and Tauranga, and increasing horticulture and viticulture add to the growing traffic demand on this highway. The route also carries all the traffic from the Heretaunga Plains area to Taupo, including the majority of northbound heavy haulage imports and exports out of Hawke's Bay, because there is no rail connection other than at Palmerston North. Various realignments and passing lanes are planned to improve safety and efficiency.

State Highway 38 from Aniwanuiwa to Wairoa, climbs from sea level at Wairoa to a maximum elevation of 660 metres and provides access for tourists to Te Urewera National Park. Minor safety improvements are planned for this highway.

State Highway 50A comprises a section of the Hawke's Bay Expressway from Links Road through to York Avenue. Investigations initiated in 2006/07 to extend the expressway further south are being processed. Transit plans to undertake the design in 2008/09. This will ultimately reduce delays and crashes at the Maraekakaho Road/York Road intersection.

Prebensen Drive/Hyderabad Road Interchange in Napier is a large project which will assist economic development by providing an efficient route to the Port of Napier.

Road Safety – Secure and Efficient Transport Corridors

Transit will continue improving the safety and efficiency of state highways. A number of large and small to medium activities have been proposed. These include realignments, intersection improvements and seal widening. Further work on the management or removal of roadside hazards will continue.

Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. To provide passing opportunities on SH2 in Hawke's Bay, a significant number of projects have been identified for progress in the next three years. These include the Gisborne to Napier Passing Opportunities north of Napier and nine passing lanes south of Hastings.

Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, a new stock effluent disposal facility is to be constructed at Glengarry Hill on SH5, currently under investigation. Another site on SH2 in the Wairoa District has been included in the forecast for investigation in 2008/09.

Walking and Cycling

The cycling strategies for Napier City Council, Hastings, Wairoa and Central Hawke's Bay District Councils, have now all been reviewed by Transit New Zealand. Six projects in Napier, Hastings, Waipawa and Waipukurau are proposed to commence in the next three years.

Strategic Studies

We are proposing to undertake several strategic studies for the Hawke's Bay region to improve our long-term planning and assist good decision-making.



Maintenance and Operations

Maintenance activities make up a large proportion of the forecast expenditure in the Hawke's Bay region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:











- › Resurface 77km and reconstruct 13km of highway
- › Carry out improvements to the surface of the unsealed section of SH38
- › Widen the carriageway to target seal widths as part of maintenance activities when appropriate and affordable
- › Provide a more forgiving roadside environment to reduce the severity of accidents
- › Continue to focus on low skid resistance sites to maintain the standard of surface friction performance already achieved
- › Improve safety and prevent road blockages on sections of the state highway with a high incidence of rock falls
- › Improve the response to ice and snow prone sections on state highways to reduce winter crash rates
- › Look for opportunities to reduce roadside noise in urban areas.

HAWKE'S BAY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work


















	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
50A	Hawke's Bay Expressway Southern Extension	Access and Mobility	0.5			
2	Matahorua Gorge Realignment	Access and Mobility	1.2			
2	Prebensen Drive / Hyderabad Road Interchange	Access and Mobility	0.2			
50A	Hawke's Bay Expressway Southern Extension	Access and Mobility	\$\$			
2	Waipukurau Overbridge Realignment	Safety & Personal Security	\$\$			
2	Matahorua Gorge Realignment	Access and Mobility	\$\$\$\$			
2	Prebensen Drive / Hyderabad Rd Interchange	Access and Mobility	\$\$			

SMALL & MEDIUM PROJECTS

Total Phase Cost

5	Dillons Hill Realignment	Safety & Personal Security	3.8			
2	Waitangi Washout Bridge Replacement	Safety & Personal Security	0.3			
2	Takapau Plains Seal Widening	Safety & Personal Security	0.1			
2	Whakaki Road Curves Improvements	Safety & Personal Security	0.1			
2	College Road to Silverstream Realignment & PL	Safety & Personal Security	0.1			
2	Waitangi Washout Bridge Replacement	Safety & Personal Security	\$			
2	Pilchers Road Intersection	Safety & Personal Security	\$			
2	Kennedy Road Intersection Improvements	Safety & Personal Security	\$			
2	North of Tumanui Road Realignment	Safety & Personal Security	\$			
2	Takapau Plains Seal Widening	Safety & Personal Security	\$			































Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

HAWKE'S BAY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.
















SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Total Phase Cost	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
SMALL & MEDIUM PROJECTS (continued)							
2	Tahaenui Bridge Replacement and Realignment	Safety & Personal Security	\$				
2	Whakaki Road Curves Improvements	Safety & Personal Security	\$			 	
2	College Road to Silverstream Realignment & PL	Safety & Personal Security	\$			 	
2	SH2/50 Intersection Improvements	Safety & Personal Security	\$				
2	Napier Road Intersection	Safety & Personal Security	\$				
2	South of Haliburton Road Realignment	Safety & Personal Security	\$				
2	Kennels Corner and Curve South	Safety & Personal Security	\$				
50	Glencoe Gorge Realignment	Safety & Personal Security	\$				
2	Bay View – 70kph Zone Traffic Management	Safety & Personal Security	\$				
2	Tutira Section Corridor Study	Safety & Personal Security	\$				
5	Tarawera Hill Enabling Works	Safety & Personal Security	\$				
Passing Lanes							
2	Otane Cemetery PL	Safety & Personal Security	1.2				
2	Napier Airport to Bay View PL	Safety & Personal Security	0.02				
2	Corkscrew Gully Nth Bd PL	Safety & Personal Security	\$				
2	Te Mahanga South PL	Safety & Personal Security	\$				
2	Opapa Nth Bd PL	Safety & Personal Security	\$				
2	Gisborne – Napier Passing Opportunities	Safety & Personal Security	\$				

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

HAWKE'S BAY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction







SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Total Phase Cost	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
Passing Lanes (continued)							
2	Poukawa Swamp North PL	Safety & Personal Security	\$				
2	Te Mahanga North PL	Safety & Personal Security	\$				
2	SH2 South of SH50 PL	Safety & Personal Security	\$				
2	Poukawa Swamp South PL	Safety & Personal Security	\$				
2	Drumpeel South PL	Safety & Personal Security	\$				
2	Corkscrew Gully Sth Bd PL	Safety & Personal Security	\$				
2	Opapa Sth Bd PL	Safety & Personal Security	\$				
50A	HB Expressway (Tutaekuri/Waimate to Ngaruroro) PL	Safety & Personal Security	\$				
2	Napier Airport to BayView PL	Safety & Personal Security	\$				
Stock Effluent Disposal Facilities							
2	Wairoa SEDF	Environmental Sustainability	0.1				
2	Wairoa SEDF	Environmental Sustainability	\$				
5	Glengarry SEDF	Environmental Sustainability	\$				

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

HAWKE'S BAY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
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Walking & Cycling

			Total Phase Cost
2	Waitangi Stream Bridge Cycleway	Public Health	1.5
2	Waipawa to Waipukurau Cycleway	Public Health	\$
2	Waipukurau Cycle Lane Network	Public Health	\$
2	Karamu Stream Bridge Cycleway	Public Health	\$
2	Bay View Cycleway – HB Strategy	Public Health	\$

Strategic Studies

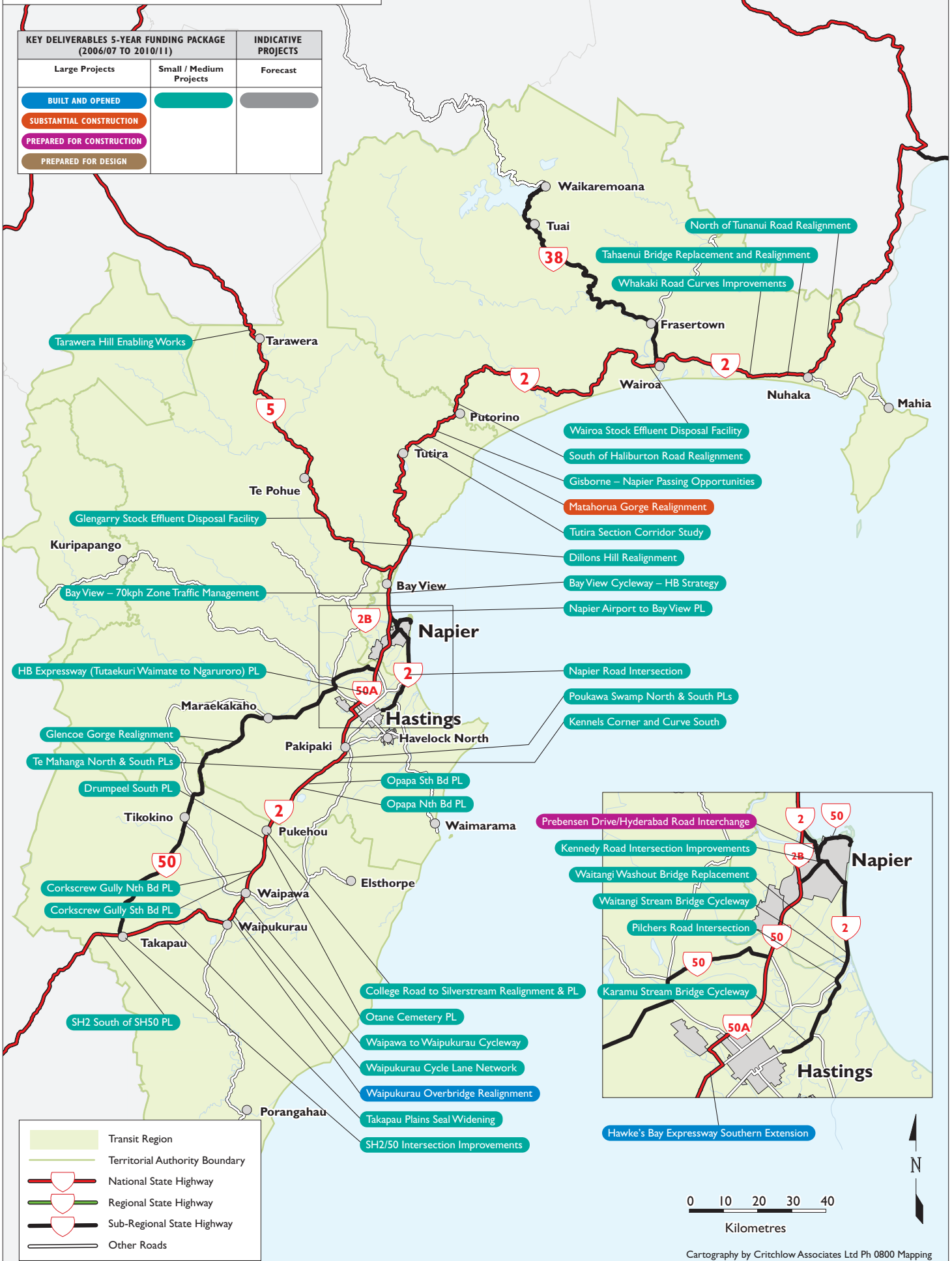
- Hawke's Bay SH Management Plan
- Region 6 Corridor Management Plan
- SH5 Napier to Taupo Strategic Study
- SH2 South of Hastings Strategic Study
- SH2 Napier to Gisborne Passing Opportunities Plan

Fig HB HAWKE'S BAY REGION

State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		





KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Taranaki region include:

- › Road safety
- › Residential and industrial development to the north of New Plymouth
- › Route security and efficiency to the north via the Awakino Gorge and to the south via Hawera
- › Tourist traffic, including development of the “Forgotten World Highway” between Taumarunui (Waikato) and Stratford (Taranaki).

How we plan to address these key issues

The state highway network in Taranaki has been improved significantly in recent years and is now generally of a high standard. The strategic significance of reliable state highway access to Taranaki is an important feature in planning for Transit’s maintenance and preventive works programmes. While the emphasis for Transit in Taranaki is on maintaining the existing state highway network, there are a number of activities to improve road safety as well as route security and efficiency in the Taranaki region. A further priority is managing the connections between state highways and local roads as well as access to state highways from adjacent land to support the medium to long distance travel function of key arterial roads.

The Normanby Road Overbridge south of Hawera is a recognised regional safety issue and will be realigned. Similarly the Rugby Road Underpass, south of Inglewood, will provide a safer and more reliable route, particularly for heavy vehicles and is presently under construction.

The Bell Block Bypass, north of New Plymouth, is a strategic route improvement between Paraitē Road and Egmont Road, bypassing a section of existing highway to reduce congestion and improve safety. The Bell Block Bypass leads into the proposed Mangaone Hill four-laning project and is part of the current construction work.

Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of SH3 for progress in the next five years, including road realignments and intersection improvements. Further work on the management or removal of roadside hazards will continue.

The Taranaki and Waikato regions have agreed to share the cost of the construction on improvements in the Awakino Gorge, including the Awakino North Realignment and the Awakino Tunnel Access Improvements, to ensure that the future reliability, security and safety of this strategic route between the two regions is retained.

South of Hawera, the widening of the Tangahoe Bridge has been contracted for construction in the current year.

Passing Opportunities

Limited passing opportunities in some parts of the region’s road network lead to driver frustration and accidents. To assess the requirement for passing opportunities in the Taranaki region, a study was undertaken on SH3 between Hawera and Wanganui. This will lead to the development of a suite of eight passing lanes between Waitotara and Hawera over the next three years.

Walking and Cycling

Investigation of the Devon Intermediate pedestrian walkway on SH45 in Western New Plymouth is progressing and improvements at the site will be undertaken in the next two years. In addition, the Bell Block to Waiwhakaiho River cycleway is now being funded as a council project.

Strategic Studies

The New Plymouth Strategic Study presently underway will identify improvements and the management and protection of strategic networks and important local roads in New Plymouth. The study has recently undergone wide public consultation and will be finalised later in 2008.







Maintenance and Operations

Maintenance and operations activities make up a large proportion of the forecast expenditure in the Taranaki region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:





























- › Resurface 115km of the network
- › Carry out 15km of road pavement reconstruction
- › Improve the availability of road condition information at critical locations on the network.

TARANAKI State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

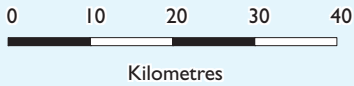
The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Primary LTMA Objective	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
3	Bell Block Bypass	11.1	Access and Mobility			
3	Rugby Road Underpass	8.8	Access and Mobility			
3	Normanby Overbridge Realignment	\$\$	Access and Mobility			
SMALL & MEDIUM PROJECTS						
Total Phase Cost						
3	Tangahoe Bridge Widening	1.8	Safety & Personal Security			
3	Muggeridge South Realignment	0.2	Safety & Personal Security			
3	Finnerty Road Right Turn Bay	\$	Safety & Personal Security			
3	Patea – Wanganui Curves Suite	\$	Safety & Personal Security			
3	Hawera – Patea Curves Suite	\$	Safety & Personal Security			
3	South of Egmont Village Curves	\$	Safety & Personal Security			
Passing Lanes						
3	Kakaramea Suite of 4 PLs	\$	Safety & Personal Security			
3	Waverley Suite of 4 PLs	\$	Safety & Personal Security			
3	Normanby North & South PLs	\$	Safety & Personal Security			
Walking & Cycling						
45	Devon Intermediate Pedestrian Facility	\$	Public Health			
Strategic Studies						
	New Plymouth Strategic Study					
	SH3 Safety Study					

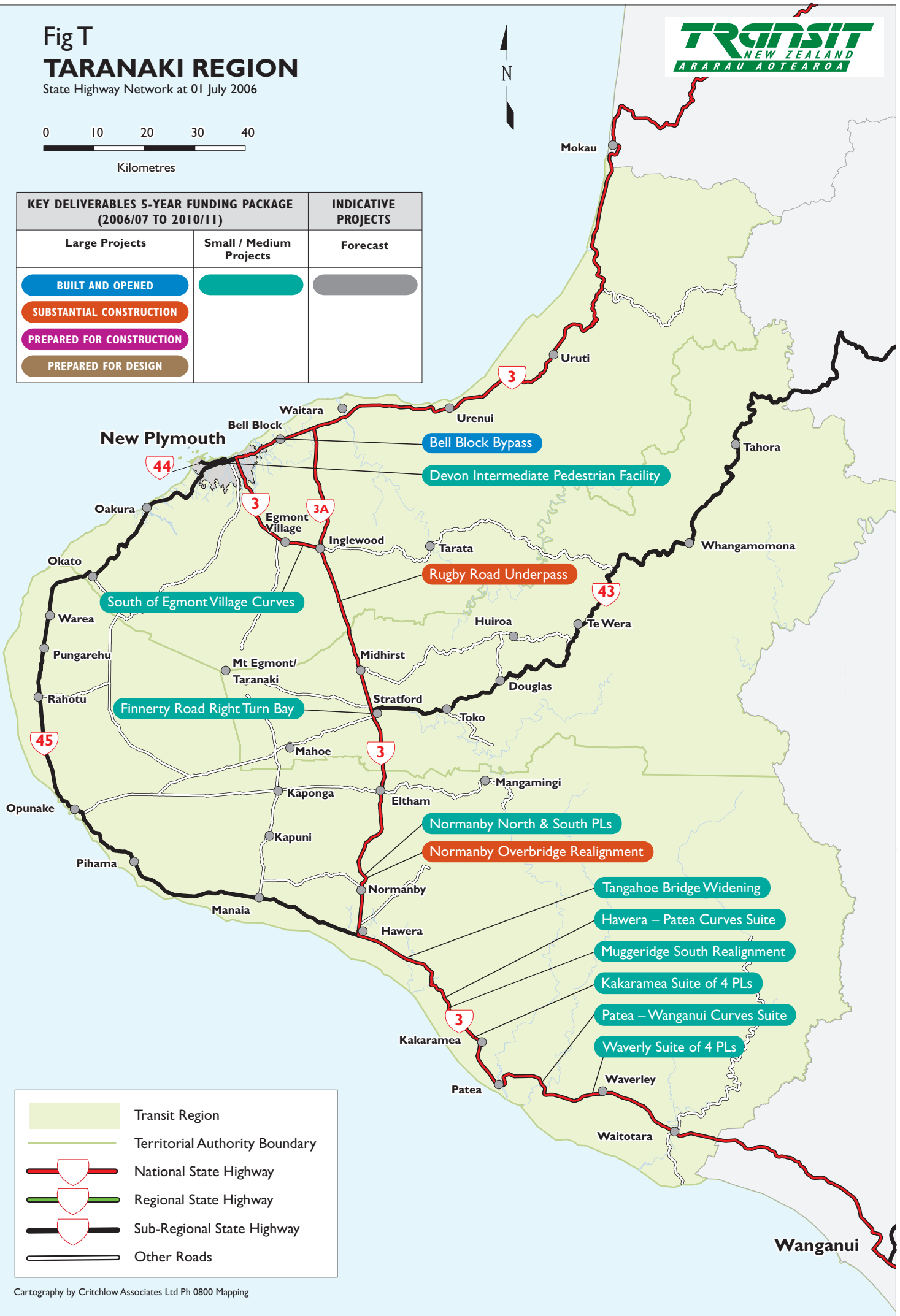
Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

Fig T TARANAKI REGION

State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Manawatu/Wanganui region include:

- › Road safety
- › Safety and capacity issues south of Levin
- › Industrial and commercial development around Palmerston North Airport, and the proposed closure of Milson Line due to airport extensions
- › Residential development to the east of Palmerston North across the Manawatu River
- › Route security and efficiency to the east, through the Manawatu Gorge
- › Additional river crossings to provide access from Palmerston North
- › The need to provide for a heavy commercial vehicle route
- › Assist in the maintenance of a lahar warning system on Mt Ruapehu.

How we plan to address these key issues

While there is a significant emphasis for Transit in the Manawatu/Wanganui region on maintaining the existing state highway network, there are a number of prioritised activities to improve road safety as well as route security and efficiency in the region. A further priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the medium to long distance travel function of key arterial roads.

Safety improvements are proposed for SH1: the Ohingaiti–Makohine Realignment south of Taihape is presently under construction to be followed later by the Papatawa Realignment near Dannevirke on SH2.

Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of small and medium-sized activities to improve the safety and efficiency of sections of the state highway, to progress in the next three years. Activities include intersection

improvements, realignments and seal widening. Implementation of works identified from previous crash reduction studies have been undertaken in the Manawatu/Rangitikei district and traffic signals have been installed on the Grey Street/Princess Street intersection (Palmerston North). Improvements are being developed for Rangitikei Street at Tremaine Avenue and J F Kennedy Drive to enhance capacity and safety. Further work on the management or removal of roadside hazards will continue.

Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. In Manawatu/Wanganui a number of projects have been identified to provide passing opportunities for progression in the next three years, consisting of three passing lanes or passing lane extensions on SH1, two passing lane extensions on SH2 and six passing lanes on SH3.

Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, Transit proposes the construction of facilities on SH2 near Woodville, on SH4 near National Park and on SH1 near Taihape.

Walking and Cycling

The Bulls Bridge Cycleway Improvement will be progressed during the next three years.

Strategic Studies

We are proposing to undertake a number of strategic studies for the Manawatu/Wanganui region, including studies of Desert Road Summit to Levin and south of Levin, to improve our long-term planning and assist good decision-making. Project Takitini at Ohakea – listed as a new strategic study in the draft forecast – will mitigate the effects of the centralisation of the air base to Ohakea.







Maintenance and Operations

Maintenance and operations activities make up a large proportion of the forecast expenditure in the Manawatu/Wanganui region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Resurface 60km of highway
- › Carry out 5km of road pavement reconstruction
- › Continue to provide high-quality skid-resistant road surfaces
- › Widen the carriageway to target seal widths as part of maintenance activities, when appropriate and affordable
- › Enhance Transit's management of slips and unstable areas to reduce road user risks and maintain route security.

MANAWATU/WANGANUI State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$ 100+M
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LARGE PROJECTS

1	Ohingaiti – Makohine Realignment	Safety & Personal Security	13.8
2	Papatawa Realignment	Safety & Personal Security	0.4
2	Papatawa Realignment	Safety & Personal Security	\$\$

SMALL & MEDIUM PROJECTS







Total Phase Cost			
4	North of Upokongaro Realignment	Safety & Personal Security	0.3
56	Highway 56 Opiki T-Junction	Safety & Personal Security	0.1
57	Makerua Intersection Improvement SH56/57	Safety & Personal Security	2.0
1	Foxton South Curves	Safety & Personal Security	2.3
3	Grey Princess Signals – Palmerston North	Economic Development	0.1
4	Manunui Intersection	Safety & Personal Security	0.2
3	Rangitikei Line JKennedy Drive Intersection	Safety & Personal Security	0.1
3	Rangitikei Line Tremaine Ave Intersection Improvement	Safety & Personal Security	0.1
4	SH4 Mahoe Wall	Safety & Personal Security	0.4
1	Waiauti Bridge Realignment	Safety & Personal Security	0.1
3	Stewart Road Intersection and Seal Widening	Safety & Personal Security	1.7
3	Concord Line Curve Realignment	Safety & Personal Security	0.1
4	Lismore Corner Realignment	Safety & Personal Security	\$
4	Hapokopoko Stream North Realignment	Safety & Personal Security	\$

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
		
		
		

MANAWATU/WANGANUI State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work



























 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$\$ 5-20M \$\$\$\$ 100+M
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SMALL & MEDIUM PROJECTS (continued)

Total Phase Cost			
1	Muhunua Road Intersection	Safety & Personal Security	\$
3	Rangitikei Line J/Kennedy Drive Intersection	Safety & Personal Security	\$
56	Wilson Road South Curve Improvement	Safety & Personal Security	\$
3	Hansen Line and Taonui North Curves	Safety & Personal Security	\$
3	Rangitikei Line Tremaine Ave Intersection Improvement	Safety & Personal Security	\$
4	SH4 Mahoe Wall	Safety & Personal Security	\$
3	SH54 Intersection	Safety & Personal Security	\$
2	Corby Road South Curves	Safety & Personal Security	\$
Var	Merge Treatments (Region 8)	Safety & Personal Security	\$
54	SH56/57 Drainage Safety Profiling	Safety & Personal Security	\$
1	Kotukutuku Road Curves	Safety & Personal Security	\$
3	Carlton / Alma / Jackson Intersection	Safety & Personal Security	\$
1	Oahu Railway Overbridge	Safety & Personal Security	\$
3	Gorge Woodville Seal Widening	Safety & Personal Security	\$
1	Waiaiti Bridge Realignment	Safety & Personal Security	\$
2	Tahoraiti Railway Crossing	Safety & Personal Security	\$
1	Linnet-Huia Street Curve Improvement	Safety & Personal Security	\$
2	Whakaruatapu Bridge Realignment	Safety & Personal Security	\$
3	Concord Line Curve Realignment	Safety & Personal Security	\$






The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		




















Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

MANAWATU/WANGANUI State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining			Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			\$ < 5M	\$\$\$ 20-100M	\$\$\$ 100+M			
SMALL & MEDIUM PROJECTS (continued)								
1	Waitarere Road Realignment	Safety & Personal Security		\$				
3	Wiktoria Intersection Improvement	Safety & Personal Security		\$				
4	Piriaka Rail Bridge and Approaches	Safety & Personal Security		\$				
57	Millrick – Kendall Realignment	Safety & Personal Security		\$				
3	London Street high school access	Safety & Personal Security		\$				
54	Cameron's Line ML Seal Widening	Safety & Personal Security		\$				
54	Kairanga Bunnythorpe Seal Widening	Safety & Personal Security		\$				
3	Ratana Hill	Safety & Personal Security		\$				
1	Manakau Rail Overbridge	Safety & Personal Security		\$				
Passing Lanes								
1	Vinegar Hill PL Extension	Safety & Personal Security	0.1					
1	Desert Road North PL	Safety & Personal Security	0.1					
1	Desert Road South PL	Safety & Personal Security	0.1					
2	Otamaraho Curve PL Extension	Safety & Personal Security	0.1					
3	Mt Stewart North PL	Safety & Personal Security	\$					
2	Otamaraho Curve PL Extension	Safety & Personal Security	\$					
3	Duddings Lake North PL	Safety & Personal Security	\$					
3	Marangai Road South PL	Safety & Personal Security	\$					
1	Sanson South PL	Safety & Personal Security	\$					









Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

MANAWATU/WANGANUI State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
	Passing Lanes (continued)					
3	Dalvey Road South PL	Safety & Personal Security	\$			
1	Golf Road South PL	Safety & Personal Security	\$			
2	Davey Hopelands PL	Safety & Personal Security	\$			
3	Pukepapa Road South PL	Safety & Personal Security	\$			
3	Oroua Road North PL	Safety & Personal Security	\$			
	Stock Effluent Disposal Facilities					
2	Dannevirike SEDF	Environmental Sustainability	\$			
1	Taihape SEDF	Environmental Sustainability	\$			
4	National Park SEDF	Environmental Sustainability	\$			
	Walking & Cycling					
1	Bulls Bridge Cycleway	Public Health	\$			
1	Manawatu River Bridge SH1 Foxton Cycle/Walkway	Public Health	\$			
57	Old West Road (North) SW	Public Health	\$			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

Strategic Studies

[Desert Summit to Levin Corridor Management Plan](#)

[Levin South Corridor Study](#)

SH1/SH3 Sanson to Manawatu Gorge Strategic Study

Fig MW MANAWATU/WANGANUI REGION

State Highway Network at 01 July 2006

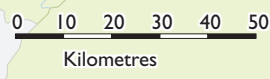
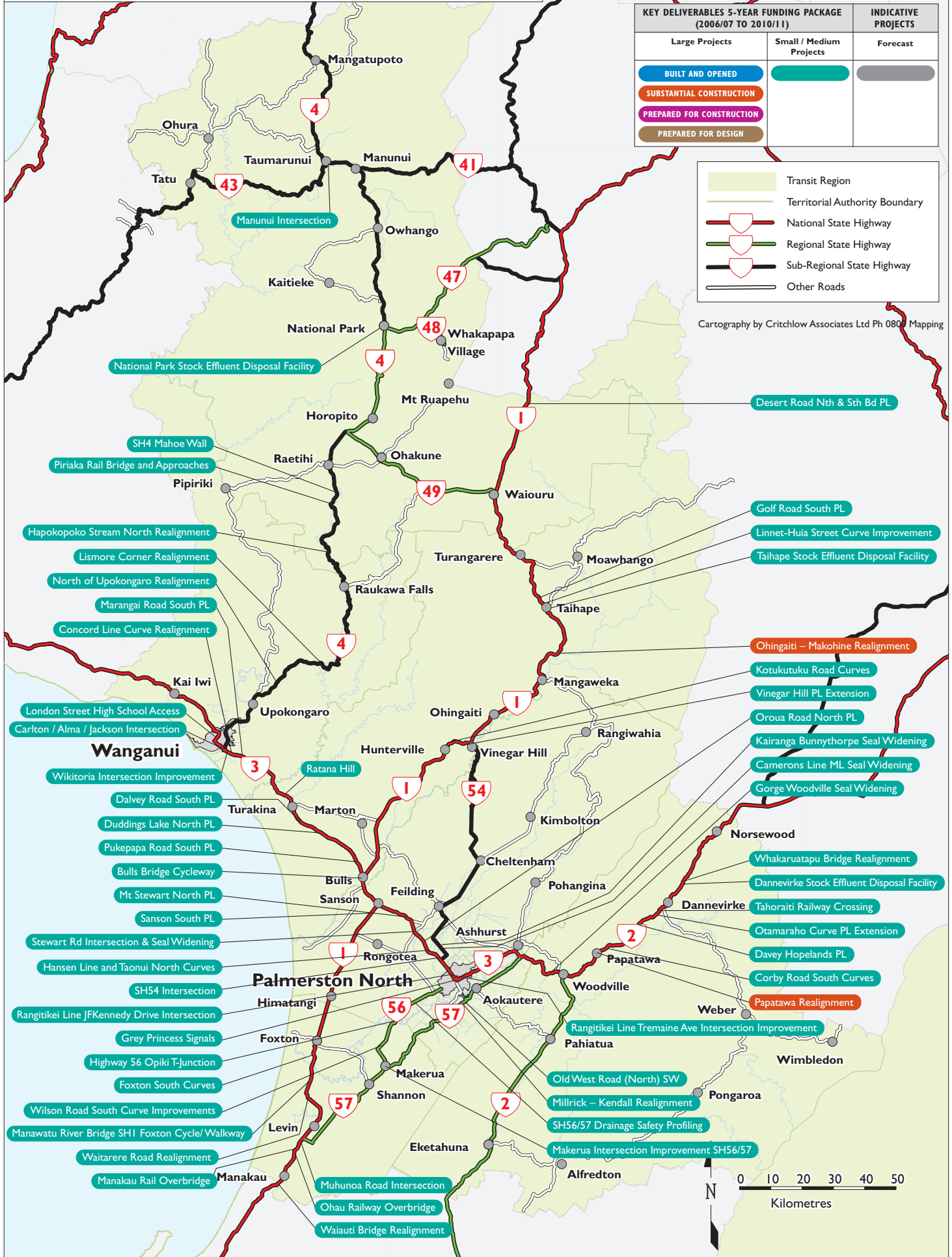


KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		

Legend:

- Transit Region
- Territorial Authority Boundary
- National State Highway
- Regional State Highway
- Sub-Regional State Highway
- Other Roads

Cartography by Critchlow Associates Ltd Ph 0800 Mapping





KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Wellington region include:

- › Road safety
- › Severe congestion, particularly at peak times, on the main routes into and out of Wellington City. Key “hot points” include SH1 through Paraparaumu and Waikanae, Paekakariki to Pukerua Bay, SH1 Ngauranga interchange, SH2 Dowse to Ngauranga, the areas around the Terrace and Mt Victoria Tunnels, as well as the Basin Reserve
- › Route security and efficiency to the north of Wellington, both on SH1 and SH2
- › Access to Wellington Airport and Wellington’s regional hospital in Newtown
- › The need for stronger connections between Lower Hutt and Porirua.

How we plan to address these key issues

Improvements are needed to reduce congestion and address safety issues along SH1 between Ngauranga and Peka Peka, just north of Waikanae.

In 2006, Greater Wellington Regional Council adopted a Western Corridor Plan for the Regional Land Transport Strategy. The plan includes travel demand measures, improvements to “park and ride” and bus-rail connections to increase passenger rail transport.

The Western Corridor plan can be geographically split into two areas, being to the north and south of MacKays Crossing. In the north, the Kapiti Western Link Road is a Kapiti Coast District Council project. It consists of a major arterial parallel to SH1 between Peka Peka Road north of Waikanae and Poplar Avenue at Raumati. This will relieve congestion on both the state highway and local roads and provide a second crossing of the Waikanae River.

Transit continues to work with Kapiti Coast District Council on the final form of the Kapiti Western Link Road, including the need for grade separation of the connections to SH1.

Transit has commenced the SH1 Kapiti Strategic Study. The objective of the study is to develop a long-term plan for a four-lane SH1 through Kapiti that provides for the sustainability of the highway while facilitating strategic, connectivity with the Kapiti Coast community and the passenger transport network. The long-term plan for SH1 will complement the committed future rail upgrades to achieve a balanced transport network on Wellington’s Western Corridor.

The construction of Transmission Gully Motorway has been included in the corridor plan, but is subject to a funding plan being finalised by the region. Funding for investigation and preliminary design has been included in the 10-year forecast and investigation work is progressing well.

Although investigation into a new road linking Grenada on SH1 with the Hutt Valley is included in the Western Corridor Plan, it is not included in the current 10-year State Highway Forecast because the status of the road is yet to be determined. Transit will be undertaking a joint study of the Grenada to Gracefield link with Wellington City Council and Hutt City Council to determine the scope of the project. This study is called the Ngauranga Triangle Study and is included in the State Highway Forecast in the 2008/09 financial year.

The Hutt Corridor is often congested, particularly south of Upper Hutt. Construction has commenced on the Dowse to Petone upgrade. The upgrade includes an overbridge at the Korokoro intersection and an interchange at the Dowse Drive intersection. These improvements include altering the Petone “park and ride” facility. Investigation of options to upgrade the Melling intersection is also included in the 10-year forecast.

The draft corridor plan for SH1 from Ngauranga to Wellington Airport and Wellington Hospital will be released for public consultation in mid-2008. This is a joint study with Wellington City Council and Greater Wellington Regional Council.

Design work on the Rimutaka Corner Easing Project to straighten some tight curves at “Muldoon’s Corner” is in progress. Transit plans to advance the construction of this project with the support of the Regional Land Transport Committee.

Other large projects forecast in the 10-year period include grade separation of the SH2 to SH58 intersection at Manor Park. Previously identified improvements required at the Basin Reserve have been retained in the forecast but are subject to confirmation by the Ngauranga to Airport Study.

Road Safety

Investigation of median barriers between Moonshine Hill Road and Silverstream on SH2, MacKays Crossing and Centennial Highway and between Otaihanga and Waikanae on SH1 is currently underway. Intersection upgrades in Carterton are programmed for construction. Design of safety improvements to both the Mt Victoria and the Terrace Tunnels and investigation of street lighting on SH1 between Johnsonville and Tawa is programmed.

The first stage of the Advanced Traffic Management System installed in Ngauranga Gorge has been effective in smoothing traffic flows and ensuring a faster response to incidents. Transit has commenced the extension of the system to other high traffic sections of SH1 from Ngauranga to the Terrace Tunnel and on SH2 from Petone to Ngauranga. In addition, electronic variable message signs are to be located at various sites to assist with safety by providing information to road users, particularly for extreme events causing road closures.

Secure and Efficient Transport Corridors

The construction of the SH2 Moonshine intersections is nearing completion.

Passing Lanes

Limited passing opportunities in some parts of the region’s road network lead to driver frustration and accidents. Passing lane projects have been identified for progress in the next three years on SH1 north of Waikanae and on SH2 in the Wairarapa.

Walking and Cycling

Opportunities for improvements to walking and cycling facilities on State Highways will be identified as part of the ongoing strategic studies in the region. Transit is also working with the Pukerua Bay community on a neighbourhood accessibility plan.

Strategic Studies

A number of strategic studies are proposed for the Wellington region including the Ngauranga Triangle Study and SH58 (as part of the investigation of the Transmission Gully Motorway).







Maintenance and Operations

Maintenance and operations activities make up the majority of the forecast expenditure in the Wellington region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:






























- › Resurface 26km of highway, including 13km of low noise surfacing
- › Apply high skid resistant surfacing on approaches to high speed intersections
- › Continue to maintain and improve the SH58 Pauatahanui inlet seawall
- › Continue with flood mitigation works on SH1 at Paekakariki
- › Work with local authorities to optimise traffic operations on both local arterials and state highways, including establishment of a dedicated Traffic Management Centre
- › Improve coordination with Police and Emergency Services in the management of incidents that affect the operation of the network
- › Continue to work with Civil Defence and Emergency Management to refine emergency response plans in and around Wellington
- › Monitor traffic and levels of congestion
- › Continue with a programme of improvements to tunnels to meet appropriate safety standards.

WELLINGTON State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.







SH	Project	Estimated Cost Remaining \$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M	Primary LTMA Objective	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
1	Buckle Street	7.7	Access and Mobility			
2	Dowse to Petone Interchange	46.6	Economic Development			
-	Transmission Gully	1.0	Economic Development			
2	Rimutaka Corner Easing (Muldoon's)	0.1	Safety & Personal Security			
-	Transmission Gully	\$\$\$\$	Economic Development			
1	Basin Reserve Improvements	\$\$\$	Economic Development			
2	Melling Interchange	\$\$\$	Economic Development			
2	Rimutaka Corner Easing (Muldoon's)	\$\$	Safety & Personal Security			
2	SH2/58 Grade Separation	\$\$	Safety & Personal Security			
SMALL & MEDIUM PROJECTS						
Var	Wellington Region Variable Message Signs	3.3	Access and Mobility			
2	Moonshine Intersections Improvements	0.1	Safety & Personal Security			
2	Petone to Ngauranga ATMS	3.8	Access and Mobility			
1	Ngauranga to Terrace Tunnel/ATMS	1.7	Access and Mobility			
1	Pukerua Bay Improvements	0.1	Safety & Personal Security			
1	MacKays Crossing to Centennial Highway Safety Improvements	0.1	Safety & Personal Security			
2	Moonshine Hill Road to Silverstream Safety Improvements	0.1	Safety & Personal Security			
2	Carterton Intersection – Pembroke Street	\$	Safety & Personal Security			
2	Carterton Intersection – Park Road / Belvedere Road	\$	Safety & Personal Security			

Total Phase Cost

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WELLINGTON State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$ 100+M
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SMALL & MEDIUM PROJECTS (continued)

			Total Phase Cost
1	Pukerua Bay Improvements	Safety & Personal Security	\$
1	Mt Victoria Tunnel Safety Improvements	Safety & Personal Security	\$
1	Terrace Tunnel Safety Improvements	Safety & Personal Security	\$
1	Mackays Crossing to Centennial Highway Safety Improvements	Safety & Personal Security	\$
1	Otailhanga to Waikanae Safety Improvements	Safety & Personal Security	\$
2	Moonshine Hill Road to Silverstream Safety Improvements	Safety & Personal Security	\$
2	Kennedy Good Bridge to SH58 Lighting	Safety & Personal Security	\$
1	Johnsonville to Tawa Lighting	Safety & Personal Security	\$

Passing Lanes

1	Otaki to Waikanae Sth Bd PL	Safety & Personal Security	2.3
2	Featherston to Greytown Nth Bd PL	Safety & Personal Security	0.6
2	Carterton to Masterton Nth Bd PL	Safety & Personal Security	0.7
2	Carterton to Greytown Sth Bd PL	Safety & Personal Security	0.4
2	Carterton to Masterton Nth Bd PL	Safety & Personal Security	\$
2	Masterton to Carterton Sth Bd PL	Safety & Personal Security	\$
2	Carterton to Greytown Nth Bd PL	Safety & Personal Security	\$
2	Carterton to Greytown Sth Bd PL	Safety & Personal Security	\$





The grey symbols show indicative timings given that the investigation or design phase has not been completed.

	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			
			
			
			
			
			
			
			
			
			
			
			
			
			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

WELLINGTON State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
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Walking & Cycling

Total Phase Cost	
Paraparaumu Rail Overbridge Clip-on Cycle Lane	\$
Teihana Rd Pedestrian Facilities	\$
Pukerua Bay Cycle Facilities	\$

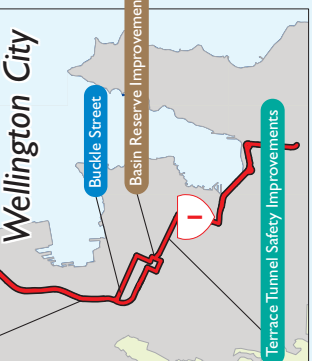
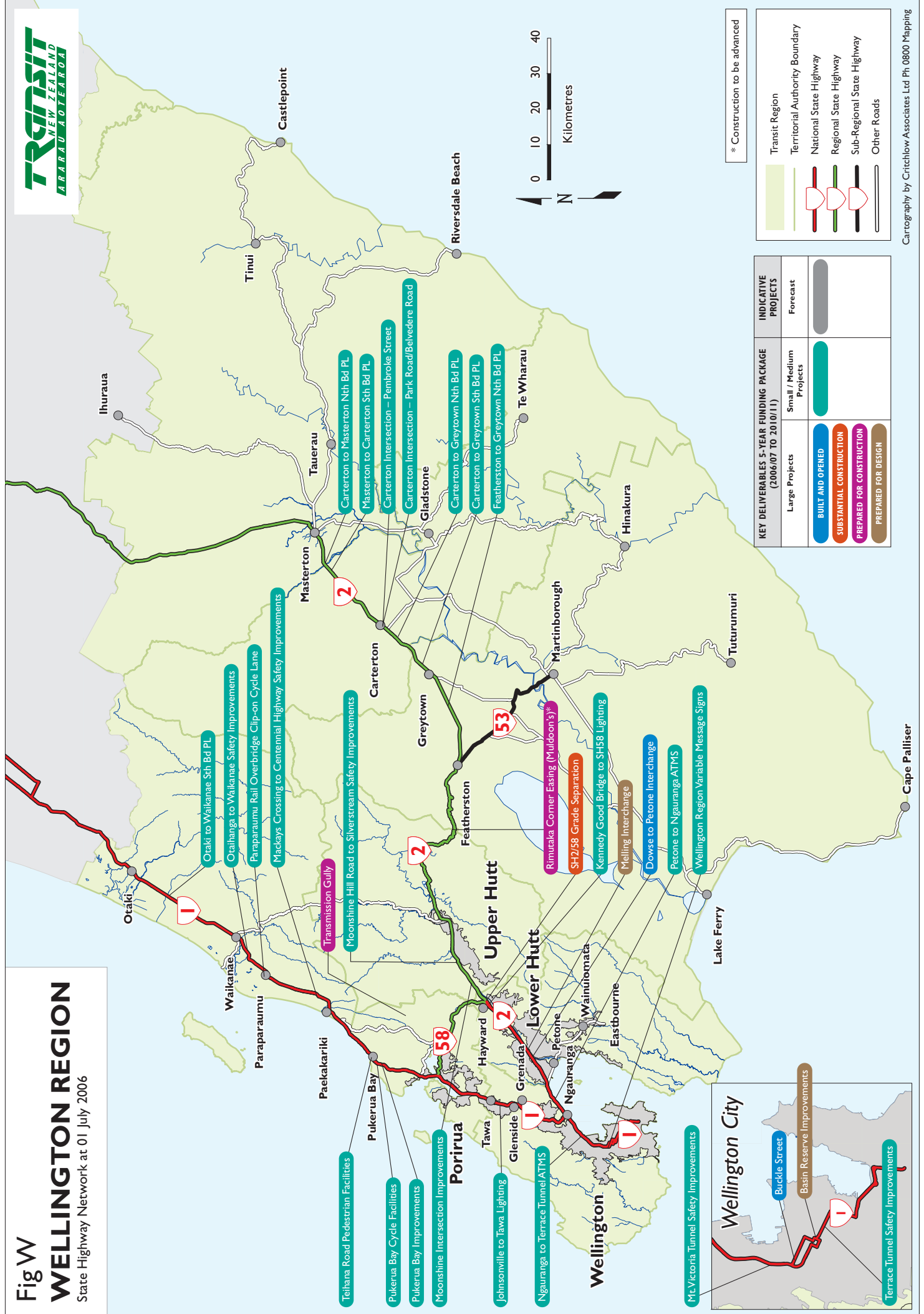
Strategic Studies

- Ngaauranga Triangle Strategic Study
- SH1 Kapiti Strategic Study
- SH2 Hutt Corridor Strategic Study
- Wairarapa Strategic Study
- SH58 Safety Improvements
- SH2 Featherston to Upper Hutt
- SH1 Ngaauranga to Airport
- Wellington State Highway Strategy
- Wellington ATMS Strategic Study
- Wellington Cycle Strategy Audit
- Porirua Walking & Cycling

Fig W

WELLINGTON REGION

State Highway Network at 01 July 2006



* Construction to be advanced

	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads

KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Nelson/Marlborough/Tasman region include:

- › Road safety
- › Travel time reliability during peak periods
- › Poor air quality in some parts of Nelson
- › Traffic growth within and beyond Blenheim, particularly on arterial roads in the Blenheim/Wairau Plains environs and Ferry traffic, a relatively unique issue with “tidal” flows throughout the day
- › Route security and efficiency to the east, north of Nelson (including the Whangamoia South Saddle), and south of Nelson, (including Hope Saddle)
- › Increased forestry traffic in Marlborough is anticipated from a significant increase in forestry harvesting to around one million tonnes per year, of which two-thirds is expected to be exported through Port Shakespeare at Picton. Nelson and Tasman are similarly expecting significant growth to two million tonnes, much of which will be exported through the Port of Nelson
- › Tourist traffic, particularly to Nelson Lakes National Park, Marlborough Sounds, Abel Tasman Park and Kahurangi National Park.

How we plan to address these key issues

While there is a significant emphasis for Transit in Marlborough, Nelson and Tasman on maintaining the existing state highway network, there are a number of activities in the 10-year State Highway Forecast to improve road safety as well as route security and efficiency in the Nelson/Marlborough/Tasman region.

The McGlashen Ave intersection and the Three Brothers Corner intersection are included in the forecast. A further priority is managing the connections between state highways and local roads as well as access to state highways from adjacent land to support the medium to long distance travel function of key arterial roads.

The Awatere Bridge Replacement project on SH1, south of Blenheim, is now complete. Construction funding for Ruby Bay Bypass was approved in May 2008. Construction will commence late in 2008. Additionally, the SH6 Whangamoia South project is included for construction, subject to confirmation of project scope and availability of regional funding.

Road Safety

Transit has identified a number of small and medium-sized projects to improve the safety and efficiency of sections of state highway and to improve safety at intersections for progress in the next three years. Projects include: SH62 seal widening of Rapaura Road from Jefferies to Wratts, and Wratts to SH1, Dashwood Overbridge, Hutchinson Bridge, SH6 / Quarantine Road intersection, Doctors Creek Bridge, out-of-context curves on various highways, Atawhai Drive intersections in North Nelson, Cable Bay Road intersection, and Colemans intersection on SH6 in Blenheim. Work on the management or removal of roadside hazards will continue.

Secure and Efficient Transport Corridors

The following intersection improvements are aimed at reducing congestion and contributing to more efficient transport corridors: constructing the McGlashen Avenue and Three Brothers Corner intersections in Richmond on SH6.

Passing Opportunities

Limited passing opportunities in some parts of the region’s road network lead to driver frustration and accidents. A passing lane project has been identified for progress in the next three years on SH1 at Grovetown, north of Blenheim as well as the Gentle Annie passing lane on SH6 in Hira.

Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities Transit proposes to progress a facility near Nelson.

Walking and Cycling

Cycle improvements on Appleby River Bridge (SH60) is proposed as well as on the Richmond Deviation.

Strategic Studies

Upcoming studies include the Motueka Transportation Study and Passing Opportunities for Marlborough and Nelson/Tasman.







Maintenance and Operations

Maintenance and operations activities make up the majority of the forecast expenditure in the Marlborough/Nelson/Tasman region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:










































- › Resurface 95km of highway, including 5km with low noise surfacing
- › Strengthen 8km of highway
- › Continue to improve the prediction of winter road conditions in order to improve emergency responses to snow and ice, and continue to trial the use of the anti-icer calcium magnesium acetate
- › Continue to manage local roads in Marlborough under contract to Marlborough District Council.

NELSON/MARLBOROUGH/TASMAN State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
60	Ruby Bay Bypass	Access and Mobility	30.1			
6	Whangamoia South Realignment	Access and Mobility	\$\$\$			
SMALL & MEDIUM PROJECTS						
Total Phase Cost						
60	SH60 Flush Median	Safety & Personal Security	0.7			
62	SH62 Rapaura – Jefferies to Wratts	Safety & Personal Security	0.1			
62	SH62 Rapaura – Wratts to SH1	Safety & Personal Security	0.1			
1	Dashwood Overbridge	Safety & Personal Security	0.1			
6	3 Brothers Corner Intersection Improvement	Safety & Personal Security	\$			
62	SH62 Rapaura – Jefferies to Wratts	Safety & Personal Security	\$			
62	SH62 Rapaura – Wratts to SH1	Safety & Personal Security	\$			
6	McGlashen Avenue Intersection Improvement	Access and Mobility	\$			
6	Sneiders Creek Realignment	Safety & Personal Security	\$			
63	Eves Valley Bridge 2L	Safety & Personal Security	\$			
1	Lions Back Safety Improvements	Safety & Personal Security	\$			
1	Dashwood Overbridge	Safety & Personal Security	\$			
6	Rai Saddle Second Curve Realignment	Safety & Personal Security	\$			
65	Hutchinson Bridge	Safety & Personal Security	\$			
6	Quarantine Road Intersection Improvement	Safety & Personal Security	\$			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

NELSON/MARLBOROUGH/TASMAN State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$\$ 5-20M \$\$\$\$ 100+M
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SMALL & MEDIUM PROJECTS (continued)

			Total Phase Cost
6	Doctors Creek Bridge	Safety & Personal Security	\$
Var	Nelson Marlborough out of Context Curves – Stage 1	Safety & Personal Security	\$
6	Atawhai Drive Intersections	Safety & Personal Security	\$
6	Cable Bay Road Intersection	Safety & Personal Security	\$
6	Colemans Intersection Improvement	Safety & Personal Security	\$

Passing Lanes

1	Grovetown Nth Bd PL	Safety & Personal Security	\$
6	Gentle Annie PL	Safety & Personal Security	\$

Stock Effluent Disposal Facilities

6	Hira SEDF (ex Richmond)	Environmental Sustainability	\$
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Walking & Cycling















60	Appleby River Bridge Cycleway	Public Health	\$
6	Richmond Deviation Walking and Cycling	Public Health	\$

Strategic Studies

- Blenheim Wairau Plains Strategic Study
- Richmond Development and Transportation Study
- SH6/60/65 Passing Opportunities Plan

- SH1 Blenheim to Christchurch
- Motueka Transportation Study
- Marlborough Passing Opportunities Plan

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

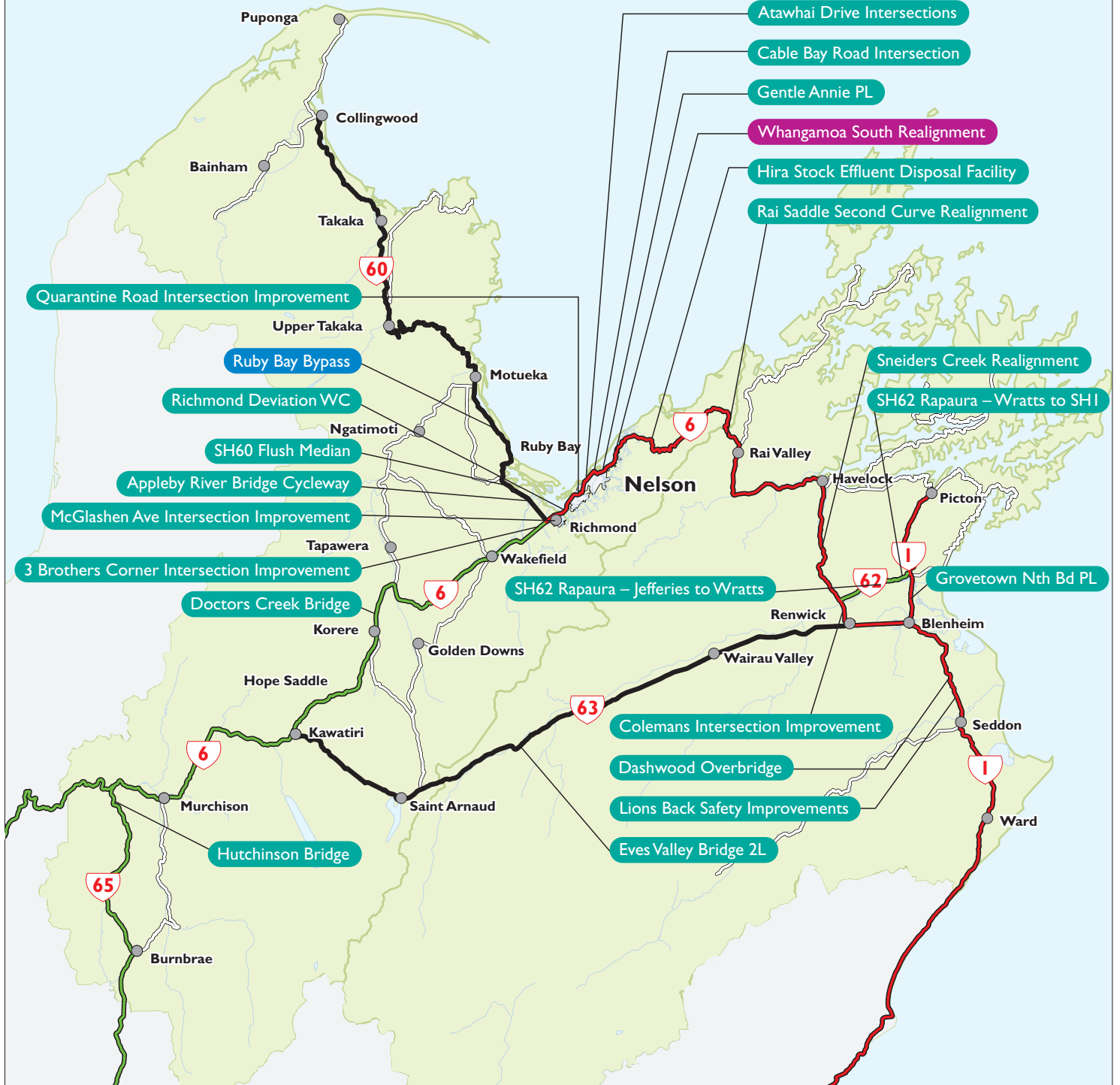
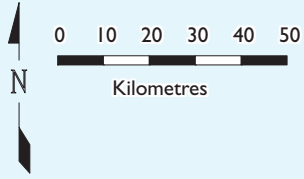
	Land Transport Programme 08/09	Plan 09/10–10/11	Forecast 11/12–17/18
			
			
			
			
			
			
			
			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

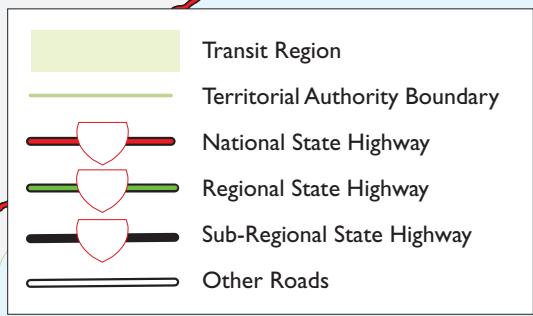
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NELSON/MARLBOROUGH/TASMAN REGIONS

State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



Cartography by Critchlow Associates Ltd Ph 0800 Mapping



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Canterbury region include:

- › Road safety
- › Congestion from traffic on the main arterial routes into and within Christchurch City increasing by four percent each year. Journeys during peak periods are regularly taking 15-20 minutes longer than during off-peak periods
- › Ongoing residential development on the outskirts of Christchurch. The Greater Christchurch Urban Development Strategy aims to integrate land use and transport for the social, economic and cultural wellbeing of the Christchurch community, including integrating other forms of transport with the road network
- › Route security of inter-district highway, especially Alpine passes
- › Ongoing commercial development to the west of Christchurch, around SH1 and SH73
- › Dairy activity in Canterbury centred on the Clandeboye Dairy Factory
- › Access to the Ports of Lyttleton and Timaru
- › Continuing tourism development around Kaikoura, south Canterbury and the Mackenzie Country
- › Desire for passing opportunities on SH1, north of Kaikoura and south of Ashburton
- › Desire for more walking and cycling activities
- › Provision for public transport priorities where necessary
- › Significant heavy vehicle growth on SH1
- › High car ownership and use in Christchurch and Canterbury.

How we plan to address these key issues

Transit will work closely with the regional and district councils to ensure there is alignment in priorities, to relieve congestion and support regional growth strategies, particularly the Greater Christchurch Urban Development Strategy.

While there is a significant emphasis for Transit in Canterbury on maintaining the existing state highway network, there are a number of activities prioritised in the 10-year State Highway Forecast to reduce congestion, improve road safety, and improve the security and efficiency of routes into and out of Canterbury.

A further priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the strategic long distance travel function of key arterial roads.

Travel Demand Management

The highest priority for the Canterbury region is the implementation of measures to support a Travel Demand Strategy outlined in the Regional Land Transport Strategy. Travel Demand Management is a combination of activities that together seek to reduce the rate of traffic growth by measures such as encouraging the use of alternative modes.

Transit intends to implement this in Christchurch through infrastructure improvements for public transport on state highways that coincide with core public transport routes, such as Main North Road. Transit will continue to work with Environment Canterbury and Christchurch City Council to further the development of the Christchurch Travel Demand Management Strategy.

Access to the North

Further project investigation and scoping will be undertaken on improving access on northern approaches to Christchurch. Specific activities include a four-lane arterial to link the Northern Motorway with QE2 Drive, and the Western Bypass of Belfast.

Access and Mobility around Christchurch

The duplication and extension of the Christchurch Southern Motorway (SH73) south of the city and the four-laning of the Western Corridor between Sawyers Arms and Yaldhurst Road will ensure efficient travel along these key routes.

Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of state highway, including intersection improvements. Proposed improvements are aimed at reducing congestion and contributing towards more efficient transport corridors. Work on the management or removal of roadside hazards will continue.

Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and crashes. Transit plans to progress further passing lanes on SH1 south of Ashburton, and north of Kaikoura.

Walking and Cycling

Walking and cycling activities identified for Canterbury include continuing Christchurch City cycle lane safety improvements and investigations into options for improving cycle safety at “pinch points” around Canterbury.

Stock Effluent Disposal Facilities

Canterbury is part of a national programme to provide a safe and convenient network of stock effluent disposal facilities. The network in Canterbury is now completed.

Strategic Studies

Strategic studies for the Canterbury region will further improve our long-term planning and assist good decision-making.

New studies proposed are the State Highway 73 Route Security and Halswell Road Strategic Study, the southern Motorway Extension (Halswell Road Junction Road to Waterholes) and the Strategy Study Implementation for Urban Christchurch.

A study of the Waitaki bridges is underway to identify the designation and design requirements of a future bridge replacement.





Maintenance and Operations

Maintenance activities make up the majority of the forecast expenditure in the Canterbury. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake 125km of resurfacing, including 1.3km with low noise surfacing
- › Strengthen 28km of state highway
- › Improve the availability of road condition information to road users using electronic variable message signs, as already in place on SH7 (Lewis Pass), and SH73 (Arthurs Pass) and in Kaikoura on SH1
- › Use thermal mapping technology on the inland network to better predict where ice will occur
- › Introduce more road weather stations to improve road condition predictions and maintenance team responses to ice and snow, and continue the use of the de-icer calcium magnesium acetate
- › Continue risk analysis of rock falls and river erosion and prioritise work accordingly
- › Strengthen a number of bridges on the network to reduce their vulnerability in the event of a severe earthquake
- › Continue to maintain and improve the coastal defences of SH1, north and south of Kaikoura
- › Work with the Department of Conservation to ensure that maintenance work within New Zealand's national parks represents international best practice
- › Continue with a programme of improvements and upgrade work to tunnels to more closely meet appropriate safety standards.
- › Strategic widening and safety improvements at various locations throughout the network.

CANTERBURY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
	LARGE PROJECTS		\$ < 5M \$\$ 5-20M \$\$\$ 20-100M \$\$\$\$ 100+M			
73	Christchurch Southern Motorway Extension §	Access and Mobility	0.6			
I	Memorial Ave Intersection	Economic Development	0.5			
73	Christchurch Southern Motorway Extension §	Access and Mobility	\$\$\$			
Var	Christchurch TDM Implementation	Economic Development	\$			
I	Christchurch Northern Arterial Rural	Access and Mobility	\$\$\$			
I	Memorial Ave Intersection	Economic Development	\$\$			
I	Memorial Ave to Yaldhurst Road 4L	Access and Mobility	\$\$			
I	Sawyers Arms to Memorial Ave 4L	Access and Mobility	\$\$			
I	Western Belfast Bypass	Access and Mobility	\$\$			
74	QE2 4L Northern Arterial to Hills Road Extension	Access and Mobility	\$\$			
	SMALL & MEDIUM PROJECTS		Total Phase Cost			
I/8	SH1/8 Intersection Improvements §	Safety & Personal Security	2.4			
74	Lyttelton Tunnel Deluge System §	Safety & Personal Security	0.2			
74	Marshland Road/QE2 Dr Intersection Upgrade	Economic Development	0.1			
74	Travis Rd / Burwood Rd / QE2 Dr Intersection Improvement	Safety & Personal Security	0.2			
I	Halswell JR/MSR Intersection Signalisation	Safety & Personal Security	0.5			
I	Belfast Intersection Upgrade	Safety & Personal Security	0.9			
















§ in conjunction with third party contributions outside NLTP funding
 Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

CANTERBURY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining			Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
			\$ < 5M	\$\$\$ 5-20M	\$\$\$ 20-100M			
SMALL & MEDIUM PROJECTS (continued)								
			Total Phase Cost					
74	Lyttelton Tunnel Deluge System §	Safety & Personal Security			\$			
74	Marshall Road/QE2 Dr Intersection Upgrade	Economic Development			\$			
73	Mingha Bluff to Rough Creek	Access and Mobility			\$			
8	Burkes Pass West Curve Realignment	Safety & Personal Security			\$			
75	SH75 / Dunbars Road Intersection §	Access and Mobility			\$			
73	Pound Road Intersection	Access and Mobility			\$			
I	Lineside Road On-Ramp	Safety & Personal Security			\$			
I	Improvement to the Shingle Fans	Safety & Personal Security			\$			
74	Travis Rd / Burwood Rd / QE2 Dr Intersection Improvement	Safety & Personal Security			\$			
79	Elliots Bridge Widening	Safety & Personal Security			\$			
79	Inmans Bridge	Safety & Personal Security			\$			
74	Dyers Road Improvements	Safety & Personal Security			\$			
Passing Lanes								
I	Winchester Sth Bd PL	Safety & Personal Security			\$			
I	Hapuku Sth Bd PL	Safety & Personal Security			\$			
I	Orari South PL	Safety & Personal Security			\$			

§ in conjunction with third party contributions outside NLTP funding
 Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

CANTERBURY State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$\$\$ 100+M
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The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
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Walking & Cycling

Christchurch City Safe Cycling Facilities

Public Health

0.3

Strategic Studies

CTS Model Update

Halswell Road Strategic Study

Southern Motorway Extension HJR to Waterholes

SH73 Route Security Strategy – Springfield to Arthurs' Pass

Greater Christchurch Transportation Strategy

SH82 Waitaki Bridges

Woodend Bypass

Christchurch Bus Priority Measures

South Canterbury Passing Opportunities Plan

Fig C

CANTERBURY REGION

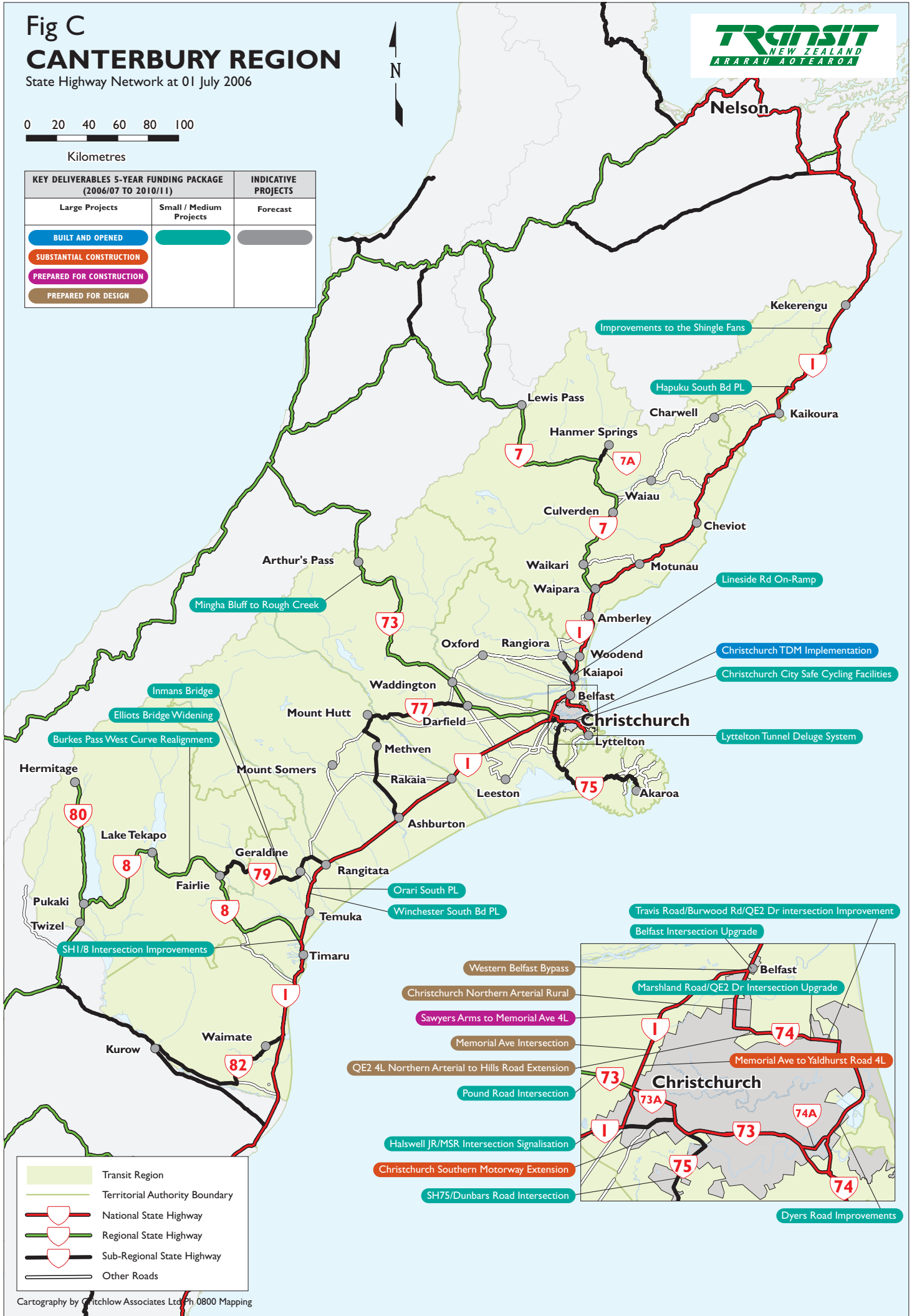
State Highway Network at 01 July 2006



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KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads

Cartography by Gitchlow Associates Ltd Ph 0800 Mapping



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the West Coast region include:

- › Road safety, a key concern being the potential conflict between heavy and light vehicle traffic, particularly on single-lane bridges on SH6
- › Ensuring secure and efficient transport corridors to the east via SH73 and Arthur's Pass, and via SH7 and Lewis Pass, to the north via SH6 and Hope Saddle, and to the south via SH6 and the Haast Pass
- › Increasing traffic due to the coal mining, dairy and tourist industries
- › Lack of passing opportunities.

How we plan to address these key issues

State Highway 6 forms the essential spine for land transport on the West Coast. A strategic study looking at route security (including areas of rockfall and coastal erosion) and passing opportunities is underway. Significant works on SH73 over recent years have greatly improved the security of this strategic link. The latest improvement to be completed was the construction of a new rail bridge at the Otira Underpass, which has allowed the vertical clearance to be increased for road traffic. Vehicles of all legal dimensions can now use this route to access the West Coast.

Traffic volumes on the West Coast are generally quite low and the state highway network is maintained to a high standard for low-volume highways. In maintaining this standard, Transit acknowledges the large tourist content of the traffic in this region. While the emphasis for Transit in the West Coast region is on maintaining the existing state highway network, there are a number of activities prioritised in the 10-year State Highway Forecast to improve road safety as well as route security and efficiency in the West Coast region.

A further priority is managing the connections between state highways and local roads as well as access to state highways from adjacent land to support the strategic long distance travel function of key arterial roads.

Construction of the Arahura River Bridge is now underway, and being managed by ONTRACK. Transit will tender the approaches work before the end of the year.

The lack of alternative access to and through the West Coast means that both SH73 and SH6 are of great strategic importance to the West Coast economy. The Gates of Haast scheme assessment is being developed to ensure the route remains secure.

Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of small to medium activities to improve the safety and efficiency of sections of state highway, including the Goat Creek Bridge Replacement on SH73. In addition, traffic signals will be installed on SH6 through the Buller Gorge to improve the safety of passing vehicles in some of the narrower locations. Also, McKendries Corner Curve Improvements are programmed for a construction start in 2008/09.

Stock Effluent Disposal Facilities

In accordance with the plan agreed with local authorities, a facility at Jacksons on SH73 is also being progressed.

Walking and Cycling

We are preparing a West Coast Cycle Strategy in association with local authorities, to improve our long term planning and ensure good decisions that lead to safer and more efficient transport networks.

Passing Lanes

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. Transit will continue to develop a strategy to identify possible locations for passing opportunities, using a mix of slow vehicle bays, seal widening and passing lanes.

Strategic Studies

A strategic study is underway, looking at Route Security Study for SH6, which will identify mitigation measures for sections of SH6 under threat of coastal erosion and rockfalls.

Maintenance and Operations











Maintenance activities make up the majority of the forecast expenditure in the West Coast region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake 95km of resurfacing
- › Strengthen 7.8km of highway
- › Improve the availability of road condition information to road users at critical points on the network using electronic variable message signs, as erected on SH7 (at Lewis Pass and Rahu Saddle). Signs for SH73, at Arthur's and Porters Pass, are soon to be commissioned
- › Use thermal mapping technology on the inland network to predict where ice may occur
- › Introduce more road weather stations to improve emergency responses to ice and snow on roads, and continue use of the de-icer calcium magnesium acetate to improve overall road safety for winter drivers
- › Continue to monitor Waiho River erosion at Franz Josef and take appropriate action to ensure SH6 remains safe and open
- › Continue risk analysis of rock falls and river erosion and prioritise works accordingly to avoid road closures
- › Strengthen a number of bridges on the network to reduce their vulnerability in the event of a severe earthquake
- › Work with the Department of Conservation to ensure maintenance works within national parks represent best practice
- › Strategic widening and safety improvements at various locations throughout the network
- › Continue with improvements in traffic management during incidents on the network.

WEST COAST State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
6	Arahura Bridge Replacement	Safety & Personal Security	19.7			
6	Gates of Haast	Safety & Personal Security	0.5			
6	Gates of Haast	Safety & Personal Security	\$\$			
SMALL & MEDIUM PROJECTS						
6	Buller Gorge Signals	Safety & Personal Security	\$			
73	Goat Creek Bridge Replacement	Safety & Personal Security	\$			
7	McKendries Corner Curve Improvements	Safety & Personal Security	\$			
Stock Effluent Disposal Facilities						
73	Jacksons SEDF	Environmental Sustainability	\$			

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

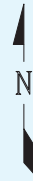
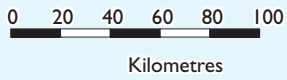
Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

- SH6 Route Security Study
- West Coast Passing Opportunities Study
- West Coast Walking and Cycling Strategy

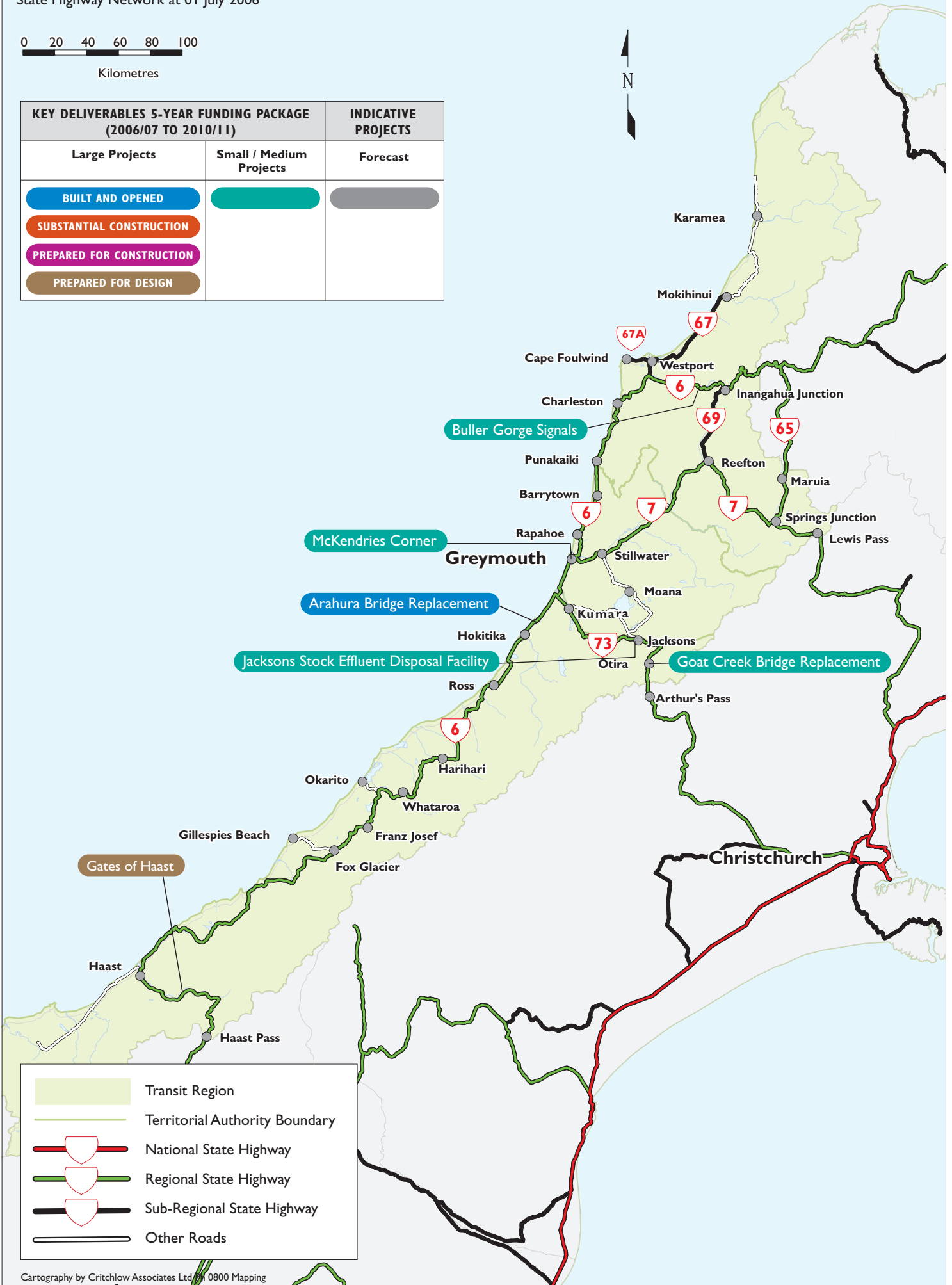
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WEST COAST REGION

State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Otago region include:

- › Road safety
- › Increased forestry traffic, as over the next 5 to 10 years the region is anticipating a significant increase in forest harvesting to two million tonnes per year, much of which will be exported through Port Chalmers
- › Tourist traffic increasing particularly around Queenstown and Wanaka
- › Areas of significant and rapid growth in Central Otago and the associated impact on the transport network
- › Congestion in Dunedin and Queenstown.

How we plan to address these key issues

While there is a significant emphasis for Transit in Otago on maintaining the existing state highway network, there are a number of activities prioritised in the State Highway Forecast to improve road safety, route security and route efficiency in the Otago region.

A key focus, especially in areas of high development growth, is the management of the connections between state highways, local roads and development accesses, in a way that supports the medium to long distance travel function of state highways.

Two key priorities for the Otago region are the investigations into the SH1 Caversham Valley Improvements Project and development of the state highway components of the Wakatipu Transportation Strategy.

The Caversham Valley Improvements Project is an important project for achieving a safe and efficient corridor between Dunedin and the south. Investigations are underway for the project.

The Wakatipu Transportation Strategy identified a number of projects for the state highway in Queenstown. One of the most significant is the

multi-modal corridor improvements along SH6A, which aim to integrate passenger transport, walking and cycling facilities and safe vehicular access. Feasibility and scoping for the SH6A multi-modal corridor project is currently underway.

Also in Queenstown, investigations for a new bridge to replace the existing one-lane bridge at Kawarau Falls on SH6 to the south of Queenstown and upgrading of the SH6/Glenda Drive intersection are underway. Both projects aim to improve safety, route efficiency and driver comfort in an area that is experiencing rapid population growth.

Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of state highway, including intersection improvements and realignments, for progress in the next five years. Some are subject to regional distribution funding.

Projects with a committed construction start in 2008/09 include, SH1 Pig Hunters Realignment, east of Lawrence and SH1 Thames Street, Oamaru.

Projects likely to have a construction start in 2008/09 include SH1 Jefferies Road, South of Palmerston, SH1 near Moeraki and SH8 east of Raes Junction

Further work on the management or removal of roadside hazards will continue.

Passing Opportunities

Limited passing opportunities in some parts of the region's road network lead to driver frustration and accidents. Two passing lanes will be completed between Balclutha and Clinton (southbound and northbound).

Further passing lanes being progressed include, investigations on SH1, near Waihola (southbound) and design of passing lanes on SH1 at Brydone Memorial, south of Oamaru.

Walking and Cycling

Construction will be commenced to extend the cycleway between Adderly Terrace to De Lacy Street on SH88 in Dunedin. Completion of a strategic study along SH88, looking at walking and cycling facilities will result in the identification and progression of further projects.

Strategic Studies

We are undertaking, or propose to undertake, three strategic studies (five listed in draft forecast) for the Otago region, to improve our long-term planning and assist good decision-making. The studies are the SH6A Bus Priority Investigations, Cromwell Structure Plan, and SH6, SH8, SH93 Passing Opportunities.

Maintenance and Operations

Maintenance activities make up a large proportion of the forecast expenditure in the Otago region. In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:


































- › Undertake some 133km of re-surfacing, including 4km of thin asphaltic surfacing, while more expensive, is more durable and quieter
- › Undertake 13km of pavement rehabilitation
- › Manage risks from snow and ice on the network by using the anti-icer calcium magnesium acetate and implement more cost effective and safer methods as they become available
- › Follow up the first stage of thermal mapping that has been conducted throughout Otago
- › Continue to develop procedures for managing rock falls and major slips to ensure route security and safety
- › Continue to manage wet road crashes by maintaining high skid resistant surfacing
- › Plant on sensitive areas along SH1 at Katiki Beach, Kilmog and the Northern Motorway to enhance the environment
- › Install electronic variable message signs on SH6 Haast Pass, to give motorists up-to-date information on road conditions
- › Continue with on-going safety strategies, to achieve the Government's 2010 safety targets.

OTAGO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction





The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
LARGE PROJECTS						
6	Kawarau Falls Bridge Replacement	Access and Mobility	0.35			
1	Caversham 4 L	Access and Mobility	\$\$\$			
SMALL & MEDIUM PROJECTS						
Total Phase Cost						
8	Pig Hunters Road Safety Improvements	Safety & Personal Security	1.5			
1	Thames St (Oamaru) Safety Improvements	Safety & Personal Security	2.9			
6	Boyd Road Realignment	Safety & Personal Security	0.1			
1	Kakaho Creek Realignment	Safety & Personal Security	0.1			
1	Jefferies Road Realignment	Safety & Personal Security	0.92			
6	Albert Town Bridge Improvements	Safety & Personal Security	\$			
1	Alma Safety	Safety & Personal Security	\$			
8	Alexandra SH8/85 Intersection Improvements	Safety & Personal Security	\$			
6	Boyd Road Realignment	Safety & Personal Security	\$			
1	Crawford St (Jervois & Police St's) Safety Improvements	Safety & Personal Security	\$			
1	Kakaho Creek Realignment	Safety & Personal Security	\$			
1	Moeraki Vertical Realignment	Safety & Personal Security	\$			
1	Waitati Curve Realignment	Safety & Personal Security	\$			
87	Riccarton / School Road Intersection Improvements	Safety & Personal Security	\$			




































Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

OTAGO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

		
Committed Investigation	Committed Design	Committed Construction
		
Investigation	Design	Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining	Land Transport Programme 08/09	Plan 09/10–10/11	Forecast 11/12–17/18
			Total Phase Cost			
SMALL & MEDIUM PROJECTS (continued)						
6	Glenda Drive Intersection Upgrade	Safety & Personal Security	\$			
1	Waikouaiti South Realignment	Safety & Personal Security	\$			
8	Raes Junction Safety Improvement	Safety & Personal Security	\$			
6	Crawfords Hill Realignment & PL	Safety & Personal Security	\$			
1	Hillend – Balclutha Realignment	Safety & Personal Security	\$			
1	Station Road Realignment	Safety & Personal Security	\$			
1	Grey Street Intersection Improvements – Right Turn Bay	Safety & Personal Security	\$			
6	Peninsula Road Intersection Improvements	Safety & Personal Security	\$			
8	Dip Creek Realignment	Safety & Personal Security	\$			
8	Ryan Road Realignment	Safety & Personal Security	\$			
Passing Lanes						
1	Balclutha to Clinton Sth Bd PL	Safety & Personal Security	\$			
1	Balclutha to Clinton Nth Bd PL	Safety & Personal Security	\$			
1	Waihola Sth Bd PL	Safety & Personal Security	\$			
1	Brydone Memorial Nth Bd PL	Safety & Personal Security	\$			
1	McEneaney Road Nth Bd PL	Safety & Personal Security	\$			
1	West Road Nth Bd PL	Safety & Personal Security	\$			
1	Palmerston Nth Bd PL	Safety & Personal Security	\$			

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

OTAGO State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work

 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
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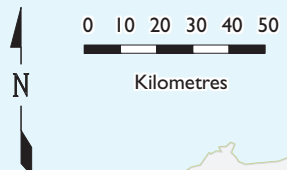
Total Phase Cost

Walking & Cycling						
88	Adderly Tce to De Lacy St Cycling Improvement	Public Health				\$
8	Clyde Pedestrian/Cycle Underpass	Safety and Personal Security				\$

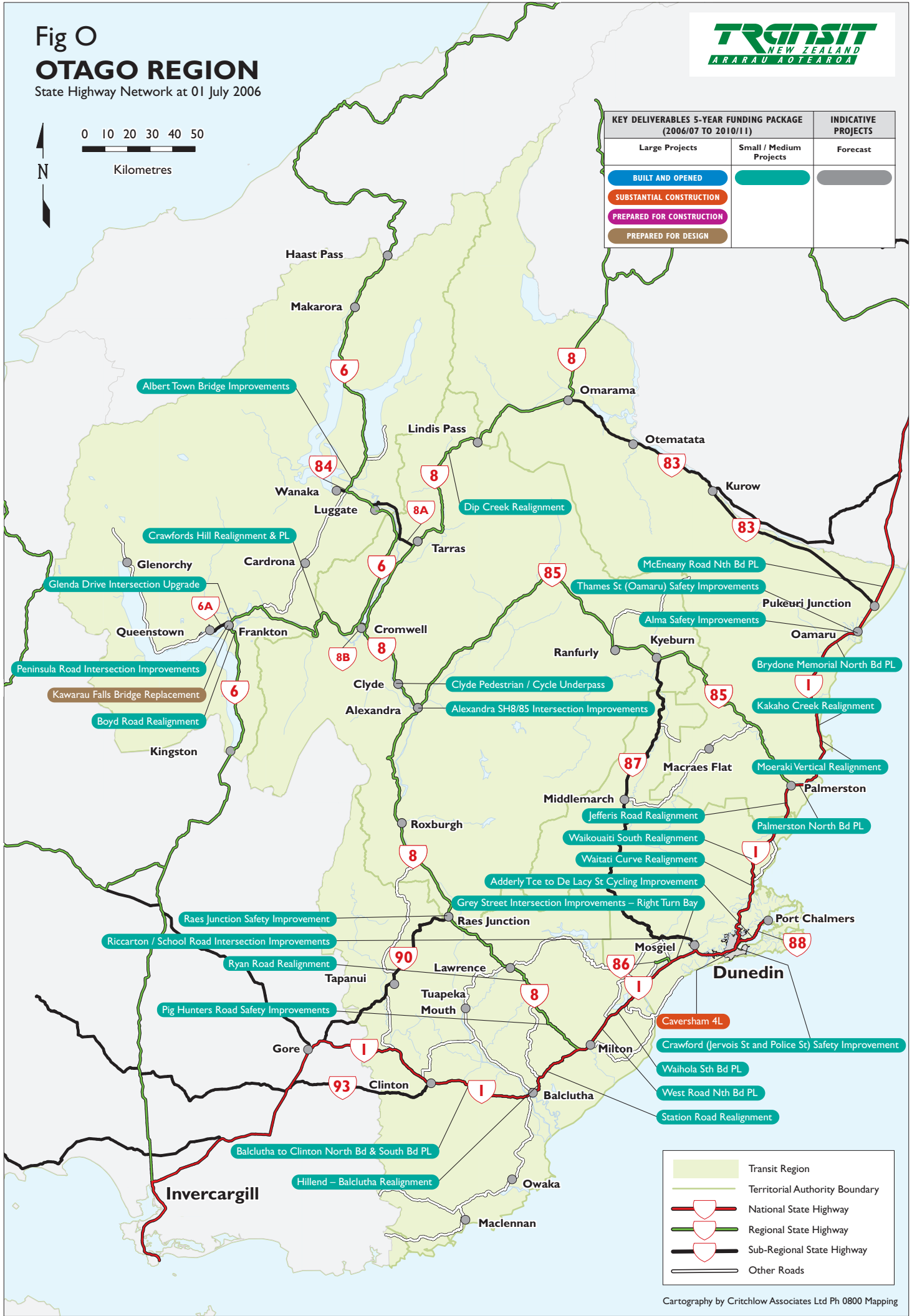
Strategic Studies

- SH6, SH8, SH93 Passing Opportunities
- SH1 North Oamaru
- Cromwell Structure Plan
- SH1 East Taieri Strategy
- SH6A Bus Priority Investigations
- SH6 Cromwell – Queenstown Strategic Study
- Otago Regional Walking & Cycling Strategy

Fig O
OTAGO REGION
 State Highway Network at 01 July 2006



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast
BUILT AND OPENED		
SUBSTANTIAL CONSTRUCTION		
PREPARED FOR CONSTRUCTION		
PREPARED FOR DESIGN		



	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads

Cartography by Critchlow Associates Ltd Ph 0800 Mapping



KEY TRANSPORT ISSUES

In meeting the objectives of the NZTS and LTMA, the key regional transport issues for the Southland region include:

- › Road safety
- › Forestry traffic
- › Dairying traffic, as the increase in the number of dairy farms is seeing increasing heavy vehicle movements, particularly around the processing plant at Edendale
- › Tourist traffic, particularly increases on the southern scenic route, to Fiordland National Park and between Queenstown and Milford Sound (SH94)
- › Lack of passing opportunities, particularly on SH1 between Edendale and Invercargill.

How we plan to address these key issues

Most state highways in Southland carry relatively low traffic volumes and few improvements are currently required apart from safety improvements to Homer Tunnel on SH94, and a realignment of SH1 at Edendale. Southland's economic growth and conversion of pasture farming to dairying is actively monitored to ensure that the current high levels of service on Southland highways are maintained.

While the emphasis for Transit in Southland is on maintaining the existing state highway network, there are a number of activities prioritised in the State Highway Forecast to improve road safety as well as route security and efficiency.

A key priority is managing the connections between state highways and local roads, as well as access to state highways from adjacent land, to support the medium to long distance travel function of state highways.

There is a continuing need for active management of SH94 between Te Anau and Milford Sound to provide an appropriate level of avalanche protection and traffic management. Transit is investigating safety improvements for the Homer Tunnel. This tunnel provides the only road access to the key tourist destination of Milford Sound.

In addition, the Edendale Realignment is proposed to improve the safety of that section of SH1 through Edendale.

Road Safety – Secure and Efficient Transport Corridors

Transit has identified a number of activities to improve the safety and efficiency of sections of state highway in Southland, including realignments, bridge widening and intersection improvements, for progress in the next five years. Further work on the management or removal of roadside hazards will continue.

Stock Effluent Disposal Facilities

As part of a national programme to provide a safe and convenient network of stock effluent disposal facilities, Transit is proposing a new facility on SH1, between Gore and Mataura and SH6 at Lumsden.

Strategic Studies

We are proposing to progress four strategic studies for the Southland region to improve our long-term planning and assist good decision-making. These include SH94/95 The Key to Milford (Te Anau), SH1 Invercargill to Bluff and SH94 Homer Tunnel Operations Study.

Maintenance and Operations







Maintenance activities make up the majority of the forecast expenditure in the Southland region.

In addition to preserving the highway network and undertaking maintenance and improvements to meet future levels of service, we propose to:

- › Undertake 72km of resurfacing, including 2.5km of thin asphaltic surfacing, which, although more expensive, is more durable and quieter
- › Undertake 15km of road pavement rehabilitation
- › Ensure the latest hazard management systems are installed at Homer Tunnel on SH94. The current avalanche hazard management system is recognized as being world-class. We intend to ensure that the programme remains adequately funded and the latest techniques are used to maximise access to Milford Sound and minimise risks to road users
- › Maintain high skid resistance surfacing to help prevent wet road crashes
- › Continue with on-going safety strategies, to achieve the Government's 2010 safety targets.
- › Install electronic variable message signs on SH94 Milford Road to give motorists up-to-date information on road conditions.

SOUTHLAND State Highway Plan and Forecast for 2008/09 to 2017/18

Legend: Nature of work








 Committed Investigation	 Committed Design	 Committed Construction
 Investigation	 Design	 Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$ 5-20M \$\$\$\$ 100+M
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LARGE PROJECTS

94	Homer Tunnel #	Safety & Personal Security	\$\$\$
1	Edendale Realignment	Safety & Personal Security	\$




SMALL & MEDIUM PROJECTS

96	Gill Road Realignment	Safety & Personal Security	0.1				
94	Falls Creek Bridge Widening	Safety & Personal Security	0.1				
6	Dipton Curve Realignment	Safety & Personal Security	0.1				
6	Gap Road Intersection Improvements	Safety & Personal Security	0.1				
1	Longbush Curve Realignment	Safety & Personal Security	\$				
96	Gill Road Realignment	Safety & Personal Security	\$				
6	Gap Road Intersection Improvements	Safety & Personal Security	\$				
94	Falls Creek Bridge Widening	Safety & Personal Security	\$				
6	Dipton Curve Realignment	Safety & Personal Security	\$				
97	Acton Downs Curve Realignment	Safety & Personal Security	\$				
1	Tay Street / Racecourse Road Intersection Improvements	Safety & Personal Security	\$				

being re-scoped via a strategic study




Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)







The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
		
		 

SOUTHLAND State Highway Plan and Forecast for 2008/09 to 2017/18


Legend: Nature of work

	Committed Investigation		Committed Design		Committed Construction
	Investigation		Design		Construction

SH	Project	Primary LTMA Objective	Estimated Cost Remaining \$ < 5M \$\$\$ 20-100M \$\$ 5-20M \$\$\$\$ 100+M	Land Transport Programme 08/09	Plan 09/10-10/11	Forecast 11/12-17/18
	Passing Lanes		Total Phase Cost			
1	Dowling Road / Mona Bush Road PL	Safety & Personal Security	\$			
1	Baird Road – Kerr Road PL	Safety & Personal Security	\$			
6	Wilson's Crossing PL	Safety & Personal Security	\$			

The grey symbols show indicative timings given that the investigation or design phase has not been completed.

Stock Effluent Disposal Facilities

6	Lumsden SEDF	Environmental Sustainability	\$			
1	Gore to Mataura SEDF	Environmental Sustainability	\$			

Strategic Studies

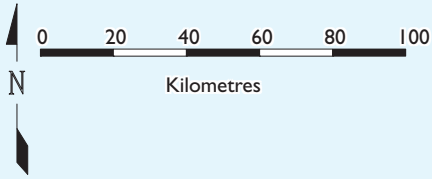
- SH94 The Key to Milford
- SH94 Homer Tunnel Operations Study
- SH1 Invercargill to Bluff Strategic Study
- Invercargill to Winton/Lorneville to Wallacetown

Projects listed in the plan years may be accelerated into the programme year to ensure full use of available funding (subject to project suitability)

Fig S

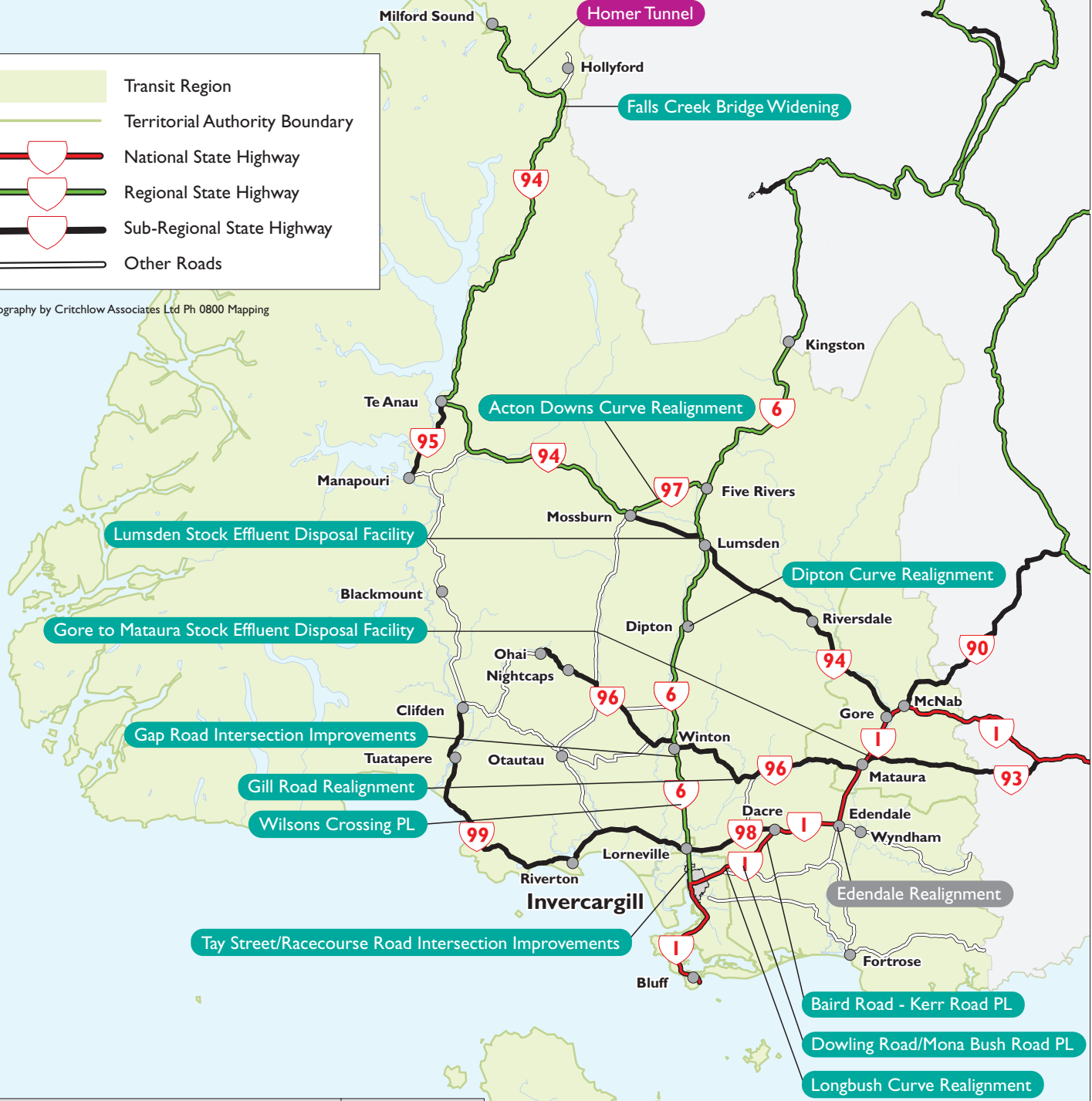
SOUTHLAND REGION

State Highway Network at 01 July 2006



	Transit Region
	Territorial Authority Boundary
	National State Highway
	Regional State Highway
	Sub-Regional State Highway
	Other Roads

Cartography by Critchlow Associates Ltd Ph 0800 Mapping



KEY DELIVERABLES 5-YEAR FUNDING PACKAGE (2006/07 TO 2010/11)		INDICATIVE PROJECTS
Large Projects	Small / Medium Projects	Forecast

APPENDIX I – STATE HIGHWAY ACTIVITIES FOR 2008/09 (LAND TRANSPORT PROGRAMME)

Large Activities (2008/09)		Economic Development	Safety and Personal Security	Access & Mobility	Public Health	Environmental Sustainability	Alternatives Considered	Options Considered	
Northland	Akerama Curves Realignment and 5th Bd PL	Rural Realignment (Safety)	<ul style="list-style-type: none"> Should reduce travel delays between economic nodes Should provide greater time reliability Ensures route efficiency 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by sub-standard alignment and limited passing opportunities 	<ul style="list-style-type: none"> No significant contribution to access and mobility 	<ul style="list-style-type: none"> Reduces the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, passing lanes
	Matakohe Realignment	Rural Realignment (Safety)	<ul style="list-style-type: none"> Promotes route security Should reduce travel delays between economic nodes Likely to provide greater time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by sub-standard alignment and seal width 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents Preserves an important access route to Auckland 	<ul style="list-style-type: none"> Reduces the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Eliminates instability of road built on a siding on current alignment Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, routes
	Brynderwyn Hill Realignment	Rural Realignment (Safety)	<ul style="list-style-type: none"> Promotes route security Should reduce travel delays between economic nodes Likely to provide greater time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by sub-standard alignment and seal width 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents Preserves an important access route to Auckland 	<ul style="list-style-type: none"> Reduces the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Eliminates instability of road built on a siding on current alignment Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, routes
Auckland	Punganui Stream Bridge	Bridge Renewals	<ul style="list-style-type: none"> Promotes route security Should reduce travel delays between economic nodes Likely to provide greater time reliability 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by narrow width constraints Minimises safety risks from potential structural failure 	<ul style="list-style-type: none"> Preserves a secure SH16 access route Supports improved access for pedestrians and cyclists 	<ul style="list-style-type: none"> Could support walking and cycling health benefits May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Likely to facilitate flow of the watercourses during flood periods Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Short-term alternatives, do-nothing 	<ul style="list-style-type: none"> Alternative engineering options
	Newmarket Viaduct to Greenlane Auxiliary Lane	Additional Lanes	<ul style="list-style-type: none"> Reduces travel delays between economic nodes Provides greater travel time reliability 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by congestion 	<ul style="list-style-type: none"> Improves mobility by reducing levels of congestion Improves access to central Auckland and Newmarket 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative TDM strategies and options
	Schedewys Hill Deviation	Rural Realignment (Safety)	<ul style="list-style-type: none"> Should reduce travel delays between economic nodes Likely to provide greater time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by sub-standard alignment 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, routes
	Warkworth Stage I	Intersection Improvement	<ul style="list-style-type: none"> Should reduce travel delays caused by local/through traffic conflicts Likely to provide greater travel time reliability 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by congestion 	<ul style="list-style-type: none"> Likely to improve mobility by reducing levels of congestion Expected to improve accessibility within Warkworth 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative TDM strategies and options
Waikato	Te Rapa Bypass	Bypass	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability Potentially creates opportunities for localised economic gains 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by congestion and local/through traffic conflicts 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents in bypassed areas 	<ul style="list-style-type: none"> Reduces the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> No significant contribution to environmental sustainability 	<ul style="list-style-type: none"> Additional safety measures, increased maintenance 	<ul style="list-style-type: none"> Alternative realignment options
	Hamilton Southern Links	Bypass	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability Provides efficient link to key industrial and commercial areas 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by local/through traffic conflicts 	<ul style="list-style-type: none"> Likely to improve mobility by reducing levels of congestion Improves access to key industrial and commercial areas Supports improved access for pedestrians and cyclists on bypass route 	<ul style="list-style-type: none"> Promotes walking and cycling health benefits Could reduce noise, vibration and air pollution impact on communities in bypassed area 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative bypass routes
	Huntly Bypass	Bypass	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability Potentially creates opportunities for localised economic gains due to improved local retail/main street conditions on bypassed route 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by congestion, sub-standard alignment, local/through traffic conflicts 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents in bypassed areas Improves important access route to Auckland Supports improved access for pedestrians and cyclists in bypassed areas 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Could reduce noise, vibration and air pollution impact on communities in bypassed area Likely to have minimal impacts on sensitive receiving environments and significant ecological resources Possibility of promoting community cohesion in bypassed area 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative bypass routes
	Long Swamp to Rangiriri 4L	Additional Lanes	<ul style="list-style-type: none"> Provides greater travel time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents at traffic conflict points 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Likely to have minimal impacts on sensitive receiving environments and significant ecological resources 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative TDM strategies and options
	Hamilton Bypass	Bypass	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability Potentially creates opportunities for localised economic gains due to improved local retail/main street conditions on bypassed route 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by congestion, sub-standard alignment, local/through traffic conflicts 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents in bypassed areas Improves important access route to Auckland Supports improved access for pedestrians and cyclists in bypassed areas 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Could reduce noise, vibration and air pollution impact on communities in bypassed area Likely to have minimal impacts on sensitive receiving environments and significant ecological resources Possibility of promoting community cohesion in bypassed area 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative bypass routes
Bay of Plenty	Tauranga Central Corridor Improvements	Intersection Improvement	<ul style="list-style-type: none"> Reduces travel delays on heavily-trafficked corridor Provides greater travel time reliability Likely to encourage shift in transport modal use 	<ul style="list-style-type: none"> Dedicated and/or purpose built facilities reduce the accident risk for pedestrians and cyclists 	<ul style="list-style-type: none"> Enhances mobility by providing choice of viable transport modes Supports improved access for pedestrians and cyclists Improves transport choices for transport disadvantaged 	<ul style="list-style-type: none"> Possible improvement in air quality could reduce respiratory illnesses Promotes walking and cycling health benefits 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Four lane corridors, alternative routes 	<ul style="list-style-type: none"> Other TDM strategies and options

Table continues overleaf

APPENDIX I – STATE HIGHWAY ACTIVITIES FOR 2008/09 (LAND TRANSPORT PROGRAMME)

Large Activities (2008/09)		Economic Development	Safety and Personal Security	Access & Mobility	Public Health	Environmental Sustainability	Alternatives Considered	Options Considered	
Hawke's Bay	Waipukurau Overbridge Realignment	Bridge Renewals	<ul style="list-style-type: none"> Promotes route security Should reduce travel delays between economic nodes Likely to provide greater time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by narrow width constraints and sub standard approach alignments Minimises safety risks from potential structural failure 	<ul style="list-style-type: none"> Contributes to a secure SH2 access route Supports improved access for cyclists 	<ul style="list-style-type: none"> Reduces the incidence of injuries caused by accidents Promotes cycling health benefit 	<ul style="list-style-type: none"> Higher travel speeds (associated with the improved realignment) are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> Alternative realignments, bridge structures
Wellington	Basin Reserve Improvements	Intersection Improvement	<ul style="list-style-type: none"> Reduces travel delays between economic nodes Provides greater travel time reliability. 	<ul style="list-style-type: none"> Expected to reduce the number of accidents at traffic conflict points 	<ul style="list-style-type: none"> Likely to improve mobility by reducing levels of congestion (which cause travel delays) Improved access to CBD and airport. Supports improved access for pedestrians and cyclists 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents Promotes walking and cycling health benefits 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Do nothing Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative intersection improvement options
	Melling Interchange	Intersection Improvement	<ul style="list-style-type: none"> Reduces travel delays between economic nodes Provides greater travel time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents at traffic conflict points 	<ul style="list-style-type: none"> Could improve mobility by reducing levels of congestion (which cause travel delays) Improves access to central business district and state highway network 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> Alternative intersection improvement options
	SH2/58 Grade Separation	Intersection Improvement	<ul style="list-style-type: none"> Should reduce travel delays caused by local/through traffic conflicts Likely to provide greater travel time reliability 	<ul style="list-style-type: none"> Potentially reduces the number of accidents at traffic conflict points 	<ul style="list-style-type: none"> Likely to improve mobility by reducing levels of congestion Expected to improve access onto the state highway network 	<ul style="list-style-type: none"> Reduces the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative TDM strategies and options
Nelson-Marlborough	Whangamoa South Realignment	Rural Realignment (Safety)	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability Promotes route security 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by sub-standard realignment and narrow seal width 	<ul style="list-style-type: none"> Likely to improve mobility by reducing the length of travel delays caused by accidents Supports improved access for cyclists 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents Promotes cycling health benefits 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> None
Canterbury	Western Belfast Bypass	Bypass	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability 	<ul style="list-style-type: none"> Potentially reduces the number of accidents caused by local/through traffic conflicts in Belfast 	<ul style="list-style-type: none"> No significant contribution to improving accessibility and mobility 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Likely to have minimal impacts on sensitive receiving environments and significant ecological resources 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative bypass routes
	QE2 4L Northern Arterial to Hills Road Extension	Additional Lanes	<ul style="list-style-type: none"> Reduces travel delays between economic nodes Provides greater travel time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by congestion 	<ul style="list-style-type: none"> Likely to improve mobility by reducing congestion (which causes travel delays) Expected to improve access to and from the growth areas to the north of Christchurch 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options
	Sawyers Arms to Memorial Avenue 4L	Additional Lanes	<ul style="list-style-type: none"> Provides strategic through route on the western edge of Christchurch city Reduces travel delays between economic nodes Provides greater travel time reliability 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by congestion 	<ul style="list-style-type: none"> Likely to improve mobility by reducing congestion (which causes travel delays) Expected to improve access and mobility to Christchurch International Airport and surrounds Supports improved access for cyclists 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents Promotes cycling health benefits 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, carriageway widening
	Christchurch Northern Arterial Rural	Bypass	<ul style="list-style-type: none"> Reduces travel delay between economic nodes, particularly CBD and Port Provides greater travel time reliability 	<ul style="list-style-type: none"> May reduce the number of accidents at traffic conflict points 	<ul style="list-style-type: none"> Likely to improve mobility by reducing levels of congestion 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents 	<ul style="list-style-type: none"> Likely to have minimal impacts on sensitive receiving environments and significant ecological resources 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative bypass routes
	Memorial Avenue to Yaldhurst Road 4L	Additional Lanes	<ul style="list-style-type: none"> Provides strategic through route on the western edge of Christchurch city Reduces travel delays between economic nodes Provides greater travel time reliability. 	<ul style="list-style-type: none"> Expected to reduce the number of accidents caused by congestion 	<ul style="list-style-type: none"> Likely to improve mobility by reducing congestion (which cause travel delays) Expected to improve access and mobility to Christchurch international airport and surrounds Supports improved access for cyclists 	<ul style="list-style-type: none"> May reduce the incidence of injuries caused by accidents Promotes cycling health benefits 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, carriageway widening
	Christchurch TDM Implementation	Travel Demand Management	<ul style="list-style-type: none"> Reduces travel delays on heavily-trafficked roads Provides greater travel time reliability 	<ul style="list-style-type: none"> Likely to reduce accident risks for pedestrians and cyclists 	<ul style="list-style-type: none"> Likely to improve mobility by reducing congestion (which causes travel delays) Expected to improve mobility by providing a choice of viable transport modes Improves transport choices for transport disadvantaged 	<ul style="list-style-type: none"> Possible improvement in air quality to could reduce respiratory illnesses Promotes walking and cycling health benefits 	<ul style="list-style-type: none"> Reducing traffic delays are likely to lead to small improvements in air quality 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> Alternative TDM strategies and options

APPENDIX 2 – CONTRIBUTION OF GENERIC PROJECTS TO NZTS AND LTMA OBJECTIVES

Project Categories	Assists Economic Development	Assists Safety and Personal Security	Improves Access & Mobility	Protects and Promotes Public Health	Ensures Environmental Sustainability	Alternatives Considered	Options Considered
Bridge Renewals	<ul style="list-style-type: none"> Minimises the risk of road closures and associated economic costs of traffic diversion and delays Preserves valuable public assets Reduces the need for bridge load restrictions which could impact on freight movements Enhances route security Can reduce travel delay and improve travel time reliability 	<ul style="list-style-type: none"> Minimises safety risks from structural failure Can reduce accidents caused by substandard alignment and congestion Can improve safety for cyclists/pedestrians 	<ul style="list-style-type: none"> Preserves or enhances current levels of access and mobility Opportunity to provide adequate access for pedestrians/cyclists 	<ul style="list-style-type: none"> May reduce injury-related accidents Potential health benefits from improved walking and cycling opportunities 	<ul style="list-style-type: none"> Opportunity to reduce adverse ecological impacts of bridge structures e.g. by reducing footprint of the bridge Opportunity to enhance visual amenity through improved design Reduces the risk of adverse environmental impacts from vehicle crashes 	<ul style="list-style-type: none"> Provision of alternative routes 	<ul style="list-style-type: none"> Alternative engineering options
Carriageway Lighting	<ul style="list-style-type: none"> Potential reduction in travel delay between economic nodes (by improving visibility, route definition and reducing accident rates) 	<ul style="list-style-type: none"> May reduce accidents caused by poor visibility or route definition Increased visibility may lessen perceived threats to personal security for cyclists and vehicle occupants 	<ul style="list-style-type: none"> Improves mobility by reducing travel delays Improves modal choice by improving conditions for cycling 	<ul style="list-style-type: none"> Health benefits from increased use of 'active' transport modes Potential reduction in injury-related accidents 	<ul style="list-style-type: none"> Reduces the risk of adverse environmental impacts from vehicle crashes Opportunity to install energy efficient lighting systems Potential reduction in vehicle related emissions by reducing dependency on motor vehicles 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> Variations in lighting design and location
Crash Reduction Studies	<ul style="list-style-type: none"> Reduced accidents from resulting network improvements would: <ul style="list-style-type: none"> Reduce travel delay between economic nodes Improve travel time reliability 	<ul style="list-style-type: none"> Network improvements likely to reduce accident rates 	<ul style="list-style-type: none"> Improves mobility by reducing accident-related travel delays 	<ul style="list-style-type: none"> Potential reduction in injury-related accidents 	<ul style="list-style-type: none"> Reduces the risk of adverse environmental impacts from vehicle crashes Resulting network improvements provide opportunity for environmental enhancement through improved environmental mitigation and low impact design 	<ul style="list-style-type: none"> Do nothing - continue to use adhoc/reactive initiatives 	<ul style="list-style-type: none"> n/a
Maintenance	<ul style="list-style-type: none"> Reduces vehicle servicing costs Maintenance practices designed to minimise traffic disruptions and duration of necessary works Minimises the likelihood of long-term traffic diversions/delays caused by significant deterioration in quality of surface and smoothness of state highways Preserves valuable public assets Reduces the need for load restrictions which could impact on freight movements Enhances route security 	<ul style="list-style-type: none"> Minimises safety risks from structural failure Ensures safety and personal security features on the network are maintained for their specified purposes e.g. pedestrian underpasses 	<ul style="list-style-type: none"> Preserves current levels of access and mobility Enables modal choice by maintaining walking and cycling facilities 	<ul style="list-style-type: none"> Risk of adverse health effects reduced by noise mitigation measures, stock effluent facilities, street cleaning, litter removal Enables/promotes continued use of walking and cycling facilities May reduce the risk of injury-related accidents 	<ul style="list-style-type: none"> Enables ongoing compliance with resource consent conditions Stock effluent facilities reduce the uncontrolled discharge of environmental contaminants Opportunity to improve the function of the existing network as it relates to the surrounding area e.g. using stormwater treatment devices to reduce pollutant contamination of water bodies, installing fish passages in drainage systems, improving ecological connectivity through landscaping, reduced chemical use in vegetation control, using recycled materials in pavement maintenance Improved visual amenity through litter removal, vegetation control and landscaping 	<ul style="list-style-type: none"> Do nothing Strategies to reduce traffic growth and volumes Promotion of alternative routes that avoid sensitive environments Advocate for appropriate land use controls to recognise reverse sensitivity (e.g. noise) 	<ul style="list-style-type: none"> Set different levels of service for maintenance
Major Drainage Control	<ul style="list-style-type: none"> Minimises damage to private property in flood/heavy rain events Reduces long term maintenance costs 	<ul style="list-style-type: none"> No significant contribution 	<ul style="list-style-type: none"> Assists in preserving current levels of access 	<ul style="list-style-type: none"> Opportunity to use stormwater treatment devices to reduce pollutants entering drinking water supplies 	<ul style="list-style-type: none"> Opportunity to use stormwater treatment devices to reduce pollutants entering water bodies 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> n/a
Minor Safety Projects: Intersection Improvement	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Reduces congestion on heavily-trafficked corridors and at network pinch points Improves travel time reliability State highway access improvements can generate land development opportunities 	<ul style="list-style-type: none"> Reduces risk of intersection crashes (vehicle and non vehicle related) 	<ul style="list-style-type: none"> Improves mobility by reducing congestion and accident-related travel delays Opportunity to improve crossing facilities for pedestrians and cyclists e.g. signalised crossings Can improve connectivity between local roads and state highway networks 	<ul style="list-style-type: none"> Potential reduction in injury-related accidents Potential public health benefits from improved walking and cycling opportunities Can reduce respiratory illnesses due to improved air quality from decreased congestion and vehicle emissions 	<ul style="list-style-type: none"> Reduces emissions by improving traffic flows Reduces the risk of adverse environmental impacts from vehicle crashes Opportunity for improved visual amenity through landscaping Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> Alternative interchange upgrade options
Minor Safety Projects: barriers and level crossing warning devices	<ul style="list-style-type: none"> Reduction in accident rate would: <ul style="list-style-type: none"> Reduce travel delay between economic nodes Improve travel time reliability 	<ul style="list-style-type: none"> Reduces risk of head-on and railway crossing accidents 	<ul style="list-style-type: none"> Improves mobility by reducing accident-related travel delays 	<ul style="list-style-type: none"> Potential reduction in injury-related accidents 	<ul style="list-style-type: none"> Reduces the risk of adverse environmental impacts from vehicle crashes 	<ul style="list-style-type: none"> Do nothing Advocating for improved coordination between railway timetables and congestion peaks 	<ul style="list-style-type: none"> Alternative engineering options/ carriageway widening
Minor Safety Projects: General	<ul style="list-style-type: none"> Reduction in accidents would: <ul style="list-style-type: none"> Generate accident cost savings Reduce travel delay between economic nodes Provide greater travel time reliability 	<ul style="list-style-type: none"> Reduces risk of accidents 	<ul style="list-style-type: none"> Improves mobility by reducing accident-related travel delays Opportunity to review provision of walking/ cycling facilities 	<ul style="list-style-type: none"> Potential reduction in injury-related accidents 	<ul style="list-style-type: none"> Reduces the risk of adverse environmental impacts from vehicle crashes Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> Alternative engineering options/ carriageway widening
New Roads and Bridges: Additional / Passing Lanes	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Reduces congestion on heavily-trafficked corridors and at network pinch points Improves travel time reliability Vehicle operating costs (e.g. fuel consumption) may decrease 	<ul style="list-style-type: none"> Reduces accidents caused by: <ul style="list-style-type: none"> congestion sub-standard alignment unsafe overtaking manoeuvres conflicts between road users 	<ul style="list-style-type: none"> Improves mobility by reducing congestion Provides opportunity to provide HOV lanes, cycling and walking facilities to improve travel choice and manage demand 	<ul style="list-style-type: none"> Potential reduction in injury-related accidents Can reduce respiratory illnesses due to improved air quality from decreased congestion and vehicle emissions 	<ul style="list-style-type: none"> Improves energy efficiency and vehicle emission performance by reducing congestion Road alignments and construction practices designed to minimise impacts on sensitive receiving environments and significant ecological resources Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design Opportunity to enhance visual amenity through design 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth e.g. promotion of alternative modes Development of bypass routes 	<ul style="list-style-type: none"> Overtaking treatments Different alignments
New Roads and Bridges: Bypass	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Reduces congestion on heavily-trafficked corridors and at network pinch points Improves travel time reliability Vehicle operating costs (e.g. fuel consumption) may decrease Potential for localised economic gains resulting from improved local retail/main street conditions on bypassed route Reduces maintenance costs on bypassed route 	<ul style="list-style-type: none"> Reduces accidents caused by: <ul style="list-style-type: none"> congestion sub-standard alignment local/through traffic conflicts Improves safety for pedestrians and cyclists on bypassed routes 	<ul style="list-style-type: none"> Improves mobility by reducing congestion Opportunity to improve local connectivity and modal choice (e.g. walking and cycling) on bypassed route 	<ul style="list-style-type: none"> Reduces noise, vibration and air pollution impacts for communities adjacent to bypassed route Air quality improvements from decreased congestion and vehicle emissions can reduce respiratory illnesses Potential health improvements due to increased opportunities for cycling and walking on bypassed routes 	<ul style="list-style-type: none"> Improves energy efficiency and localised air quality by reducing congestion and emissions on bypassed route Road alignments designed to minimise impacts on sensitive receiving environments and significant ecological resources Promotes community cohesion on bypassed route Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design Opportunity to enhance visual amenity on bypassed and bypass routes through improved design 	<ul style="list-style-type: none"> Strategies to reduce speed, traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, carriageway widening

Table continues overleaf

APPENDIX 2 – CONTRIBUTION OF GENERIC PROJECTS TO NZTS AND LTMA OBJECTIVES

Project Categories	Assists Economic Development	Assists Safety and Personal Security	Improves Access & Mobility	Protects and Promotes Public Health	Ensures Environmental Sustainability	Alternatives Considered	Options Considered
New Roads and Bridges: Rural Realignment - Safety and Time	<ul style="list-style-type: none"> Reduce travel delay between economic nodes Improve travel time reliability Reduces vehicle operating costs (e.g. fuel consumption) Improves efficiency for freight movements 	<ul style="list-style-type: none"> Reduces accidents caused by congestion and sub-standard alignment Provides opportunity to improve safety for all road users 	<ul style="list-style-type: none"> Improves mobility by reducing accident-related travel delays 	<ul style="list-style-type: none"> Potential reduction in injury-related accidents Air quality improvements from decreased congestion and vehicle emissions can reduce respiratory illnesses 	<ul style="list-style-type: none"> Road realignments designed to minimise impacts on sensitive receiving environments and significant ecological resources Reduced travel delay may improve energy efficiency and localised air quality by reducing emissions Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design Opportunity to enhance visual amenity through design 	<ul style="list-style-type: none"> Do nothing Development of alternative routes 	<ul style="list-style-type: none"> Alternative realignment options, carriageway widening
New Roads and Bridges: General	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Reduces congestion on heavily-trafficked corridors and at network pinch points Improves travel time reliability Vehicle operating costs (e.g. fuel consumption) may decrease Reduces maintenance costs on existing route 	<ul style="list-style-type: none"> Reduces accidents caused by congestion and sub-standard alignment Provides opportunity to improve safety for all road users 	<ul style="list-style-type: none"> Improves accessibility by providing more direct route Potential to improve walking and cycling linkages Improves mobility by reducing congestion 	<ul style="list-style-type: none"> Potential public health benefits from improved walking and cycling opportunities Air quality improvements from decreased congestion and vehicle emissions can reduce respiratory illnesses 	<ul style="list-style-type: none"> Potential for improved energy efficiency and localised air quality by reducing congestion Road alignments designed to minimise impacts on sensitive receiving environments and significant ecological resources Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design Opportunity to enhance visual amenity through design 	<ul style="list-style-type: none"> Strategies to reduce traffic volumes and growth 	<ul style="list-style-type: none"> Alternative realignment options, carriageway widening
Public Transport Rooding Improvements: Bus lanes	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability Reduces congestion on heavily-trafficked corridors 	<ul style="list-style-type: none"> Potential to reduce accidents caused by congestion 	<ul style="list-style-type: none"> Improves mobility by reducing congestion and improving modal choice Improves viability of bus travel as an alternative to the private car Assists in managing travel demand by improving modal choice 	<ul style="list-style-type: none"> Air quality improvements from decreased congestion and vehicle emissions can reduce respiratory illnesses 	<ul style="list-style-type: none"> Potential for improved energy efficiency and localised air quality by reducing congestion Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design Opportunity to enhance visual amenity through design 	<ul style="list-style-type: none"> Do nothing Increase roading network capacity 	<ul style="list-style-type: none"> Other TDM measures
Route Protection (Preventive Maintenance)	<ul style="list-style-type: none"> Preserves valuable public assets Minimises the risk of road closure and associated economic costs of traffic diversion and delay 	<ul style="list-style-type: none"> Minimises risk of personal injury from vehicle accidents, falling debris etc. in emergency event 	<ul style="list-style-type: none"> Reduces risk of access and mobility being severely compromised in emergency event 	<ul style="list-style-type: none"> Reduces risk of injury related accidents 	<ul style="list-style-type: none"> Reduces risk of erosion and adverse effects of soil dumps on receiving environments e.g. sedimentation 	<ul style="list-style-type: none"> Do nothing Develop alternative routes 	n/a
Seal Extension	<ul style="list-style-type: none"> Reduces long term maintenance costs Reduces travel time and delays Reduced roughness reduces vehicle operating cost 	<ul style="list-style-type: none"> Improves safety by improving grip (vehicle cyclists) Potential reduction in loss of control accidents 	<ul style="list-style-type: none"> Improves access to remote areas Improves modal choice by improving conditions for cycling and walking 	<ul style="list-style-type: none"> Reduces air and water pollution impact by reducing dust Reduces noise impact Health benefits of walking and cycling Potential reduction in injury-related accidents 	<ul style="list-style-type: none"> Dust reduction improves local air and water quality 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> More extensive realignment and carriageway reconstruction Increased use of dust suppression measures and low dust generating surfaces
Seal Widening	<ul style="list-style-type: none"> Reduces travel time by improving traffic speeds/flow 	<ul style="list-style-type: none"> Potentially reduces accidents caused by narrow seal width and loss of control 	<ul style="list-style-type: none"> Improves modal choice by improving conditions for cycling and walking (i.e. opportunity to widen shoulder) 	<ul style="list-style-type: none"> Can promote cycling and walking in rural areas 	<ul style="list-style-type: none"> No significant contribution 	<ul style="list-style-type: none"> Do nothing 	<ul style="list-style-type: none"> More extensive realignment and carriageway reconstruction
Traffic Management Systems	<ul style="list-style-type: none"> Reduces travel delay between economic nodes Provides greater travel time reliability Reduces congestion on heavily-trafficked corridors 	<ul style="list-style-type: none"> Potential to reduce accidents caused by congestion or incidents Can improve response time for emergency services 	<ul style="list-style-type: none"> Improves mobility by reducing congestion, identifying incidents and informing motorists of alternative routes 	<ul style="list-style-type: none"> May reduce risk of injury related accidents 	<ul style="list-style-type: none"> Improves energy efficiency and vehicle emission performance from reduced congestion Enables prompt responses to incidents such as hazardous spills 	<ul style="list-style-type: none"> Do nothing Develop alternative routes 	<ul style="list-style-type: none"> Other TDM measures
Transportation and Strategic Studies	<ul style="list-style-type: none"> Network improvements resulting from study recommendations may reduce congestion and improve safety along a corridor, which would: <ul style="list-style-type: none"> Reduce travel delay between economic nodes Improve travel time reliability Reduce congestion on heavily-trafficked corridors 	<ul style="list-style-type: none"> Network improvements resulting from the strategy may: <ul style="list-style-type: none"> reduce accident rates along corridor improve safety and personal security of cyclists and pedestrians 	<ul style="list-style-type: none"> Network improvements resulting from the strategy may improve access and mobility by: <ul style="list-style-type: none"> improving modal choice reducing congestion reducing accident rates providing priority for freight or HOV etc. 	<ul style="list-style-type: none"> Air quality improvements from decreased congestion and vehicle emissions can reduce respiratory illnesses Potential health improvements from improved cycling and pedestrian facilities Opportunities to identify and address specific health-related community concerns 	<ul style="list-style-type: none"> Resulting strategy can: <ul style="list-style-type: none"> improve energy efficiency and vehicle emission performance from reduced congestion ensure road alignments are designed to minimise impacts on sensitive receiving environments and significant ecological resources improve visual amenity through design and landscaping provide opportunity for environmental enhancement through improved environmental mitigation and low impact design provide opportunity to identify and address specific community concerns identify urban design framework to guide future development of corridor(s) 	<ul style="list-style-type: none"> Do nothing Ad hoc/reactive initiatives 	n/a
Walking and Cycling facilities	<ul style="list-style-type: none"> Marginal reduction in congestion and travel delay by encouraging shorter and medium length trips to be undertaken by non-vehicular means Improves traffic flows by controlling pedestrian crossing points 	<ul style="list-style-type: none"> Dedicated and/or purpose-built facilities reduce the accident risk for pedestrians and cyclists Opportunity to improve personal security for pedestrian and cyclists by designing facilities in accordance with urban design principles 	<ul style="list-style-type: none"> Improves mobility by providing choice of viable transport modes for short/medium trips Improves transport choices for transport disadvantaged 	<ul style="list-style-type: none"> Health benefits of walking and cycling Marginal reduction in noise, vibration and air pollution impacts by reducing motor vehicle short trips 	<ul style="list-style-type: none"> Reduces vehicle related emissions by reducing dependency on motor vehicles Reduces reliance on non-renewable sources of energy Provides opportunity for environmental enhancement through improved environmental mitigation and low impact design Opportunity to enhance visual amenity through design 	<ul style="list-style-type: none"> Do nothing Advocate to local authorities to provide walking and cycling facilities 	<ul style="list-style-type: none"> Alternative engineering options e.g. road widening

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