EXECUTIVE SUMMARY

Transit's forecasts of expenditure in Canterbury for the next 10 years are set out in Table C1. Transit anticipates it will have further expenditure from regional distribution funding, but this is yet to be determined.

These forecasts of expenditure are based on a 10-year plan of maintenance and improvements, including commitments. The timeframe for the development and construction of the improvements proposed in the 10-year plan are indicative only, and are likely to change depending on the use of regional distribution funding to advance projects.

The Canterbury state highway 10-year plan seeks to protect and preserve the existing asset, mitigate the growing congestion problem within Christchurch in conjunction with local authorities, improve road safety, and improve the security and efficiency of the routes into and out of Canterbury.

Major features of the plan are:

- investigations into access improvements to the north of Christchurch City – the Northern Arterial and Western Belfast Bypass and the four-laning of a section of QEII drive
- safety improvements for construction in the next three years include:
  - East/West Street Intersection in Ashburton
  - South SH1 Intersection in Ashburton
  - Kerrytown Road Curve Realignment
- further development of the Christchurch Southern Motorway duplication and extension and of the four-laning of SH1 (Carmen/Russley Roads) west of the city centre.
- three more stock effluent disposal sites at Pareora (SH1), Kaikoura (SH1) and Springfield (SH73)
- cycle facilities within Christchurch City and on the Jed, School and Boyle River bridges
- Construction of passing lanes at another 12 locations on SH1.

KEY REGIONAL TRANSPORT ISSUES

The key regional transport issues in Canterbury include:

- congestion in Christchurch – traffic growth on the main arterial routes within Christchurch City is running at 4% per year and up to 8% per year on the recently declared state highway on the Christchurch Ring Road. Key 'hot points' are the main arterial routes of the Northern Motorway, Russley/Johns/Masham/Carmen Roads, Main North Road, Christchurch Ring Road, Blenheim Road, Main South Road and Halswell Road. Journeys in the peak periods are regularly taking 15-20 minutes longer than off-peak periods. This traffic growth results from significant industrial and residential development to the north (Kaiapoi/Rangiora and northern Christchurch), the south (Prebbleton, Lincoln, Rolleston and the southwest quadrant of the city) and in the west (generally associated with airport activities).
- road safety
- secure and efficient routes - SH73: the Arthur's Pass area
- passing opportunities on higher-volume highways.

TRANSIT'S CONTRIBUTION TO TRANSPORT ISSUES

The Canterbury region has amongst the most extensive network of state highways in New Zealand, albeit that much of the network is relatively lightly trafficked, and generally the highways in Canterbury are of a high standard. Apart from a few major realignments, only relatively minor safety improvements and additional passing lanes are required over the next 10 years.

Within Christchurch City and on its approaches, there is an ongoing requirement for improvements to the arterial road network to accommodate traffic growth and serve urban and economic development. These improvements complement the Regional Land Transport Strategy provisions to relieve congestion through a range of measures including promoting passenger transport (bus), completion of improvements to the 'ring route' system, improved access from the north and south of the city, and travel demand management (including travel plans, walking and cycling, and teleworking).

The locations of possible Canterbury projects in the 10-year plan are shown in Figure C. The expected cost and possible timeframe for the development and construction of these projects is indicated in Table C2. The timing of projects could be advanced depending on the allocation of regional distribution funding. A final policy has yet to be determined by Transfund New Zealand (as at July 2004).

Large improvement projects (with construction costs more than $3M) have been planned for 10 years and small and medium-sized projects (with construction costs of less than $3M) have been planned for three years.

Congestion relief (Christchurch City and Environs)

Ongoing improvements are required to the state highway network in Christchurch City, and in Waimakariri and Selwyn districts, to support urban growth. Within Christchurch City, Transit proposes to maintain and further develop a state highway network comprising:

- a north/south bypass of Christchurch via Russley/Johns/Masham and Carmen Roads
- part of the Christchurch Ring Road comprising Queen Elizabeth II Drive, Travis Road, Anzac Drive, Dyers Road, Palinarus Street, Rutherford Street, Garlands Road, Opawa Road, Brougham Street, the Southern Motorway, Curletts Road
- access to the north via the Northern Motorway
- access to Lyttelton and the port via Port Hills Road and Tunnel Road
- access to Akaroa via Halswell Road
- access to the west via Yaldhurst Road
- a proposed northern arterial route linking the Northern Motorway and Queen Elizabeth II Drive
- a possible bypass of Belfast between the Northern Motorway and Johns Road.

Currently, SH74: Main North Road Four-Laning (Stage 2) is under construction and the SH73: Christchurch Southern Motorway Duplication and Extension project is planned for a design start in 2004/05 and for construction later in the 10-year plan. Construction could be advanced by regional distribution funding.

Transit's long-term plan is to four-lane Johns/Russley/Masham/Carmen Roads. This could happen within the next 10 years depending on funding. In the meantime a number of intersection improvements are being undertaken including:

- SH1: Yaldhurst Road Intersection Signalisation
- SH1: Buchanans Road Intersection Signalisation
- SH1: Main South Road/Carmen Road Intersection Improvements at Hornby.

Transit has retained the Northern Arterial, north of Queen Elizabeth II Drive as a potential project. The timing of the Northern Arterial is likely to be dependent on the development of an effective local road network south of QEII Drive, to feed the Northern Arterial. Likewise, the Western Belfast bypass is included as a potential project for further investigation.

Within Waimakariri District, there are long-term plans to complete the duplication of the Northern Motorway and construct a bypass of Woodend on SH1, and to four-lane SH71 to Rangiora. At this stage, no route has been determined for a bypass of Woodend. Within Selwyn District, the major long-term requirement is to four-lane SH1 between Christchurch and Rolleston with an appropriate connection into Rolleston to serve the urban growth proposed for this area.

Road Safety

Transit plans to remove the 'out of context' sections of state highway, roadside hazards, provide a network of stock truck effluent disposal sites, and improve walking and cycling opportunities.

Rural Realignments

The construction of SH1 at Normanby in South Canterbury is well advanced. This 4-kilometre realignment will improve safety on this substandard section of SH1, just south of Timaru.

Transit envisages that further improvements will be required to SH73 to the West Coast to improve the alignment of the section between Klondyke Corner and Arthur's Pass and to manage the instability of rock slopes on each side of the highway between Springfield and Arthur's Pass.

Other rural highway realignments that could be advanced depending on the allocation of regional distribution funding include:

- SH1: Okarahia Realignment, over the Hundalee Hills, south of Kaikoura
- SH7: Hells Gate Realignment, south of the turn-off to Hanmer Springs on SH7A
- SH 7: Haypaddock Hill Realignment, west of the turn-off to Hanmer Springs on SH7A
- SH73: Thomas River Realignment, near the Castle Hill Village
- SH73: Lake Lyndon Realignment, west of Springfield.

Small and medium-sized safety improvements completed during 2003/04 include:

- Issits Culvert Realignment on SH79, north of Fairlie
- Realignment of substandard curves on SH7, north east of Waipara
- Realignment of substandard curves on SH1, north of Omihi
- Signalisation of the Buchanans Road Intersection on SH1 in Chistchurch.

Small and medium-sized projects under development include:

- SH1: Otumatu Point Curve Improvement, south of Kaikoura
- SH7: Stewarts Fan Realignment, east of Lewis Pass summit
- SH77: Windwhistle Corner Realignment, east of the Rakaia Gorge.

Guardrail projects

Guardrail projects include:

- SH1: Okiwi Bay Safety Improvement, north of Kaikoura
- SH1: Rakaia Overbridge Guardrail, north of the Rakaia River
- SH7: Handyside to Waterfall Guardrail, west of Hanmer Springs turn-off.

Intersection Improvements

Intersection improvements include:

- SH1: Empire Road Off-ramp Improvements, Christchurch Northern Motorway
- SH1: Robinsons/Curraghs Right-turn Bay, south of Templeton
- SH1: South Street Intersection, south of Ashburton
- SH73: Kirk Road Intersection, west of Yaldhurst
- SH1: Yaldhurst Intersection in Christchurch.

Transit also proposes to widen the Kowai River No. 2 Bridge, west of Spingfield on SH73.

A number of other safety improvements may be possible depending on regional distribution funding.

Stock Effluent Disposal Facilities

In accordance with the plan agreed with local authorities, two new stock effluent disposal facilities have recently been constructed. These are located at:

- SH1: Glasnevin, south of the SH1/SH7 junction
- SH1: Tinwald, Ashburton.

In addition, in the next three years it is proposed to complete facilities at:

- SH 1: Kaikoura at the intersection with Route 70
- SH 73: Near Springfield
- SH 1: Pareora – south of Timaru (needs to be confirmed on completion of the Tinwald site).

Route Efficiency (Passing Lanes)

Passing lanes completed during 2003/04 include:

- SH1: Omihi Southbound Passing Lanes, north of Omihi
- SH1: Winslow Passing Lanes, south of Ashburton
- SH1: Waipapa Passing Lanes, north of Kaikoura.

The following additional passing lanes have been included in the 10-year plan:

- SH1: Hapuku Southbound Passing Lane, north of Kaikoura
- SH1: Clarence North Southbound Passing Lane, north of Clarence River
- SH1: Amberley Passing Lanes, south of Amberley
- SH1: Limestone Creek Passing Lane, south of Oaro
- SH1: Seadown Passing Lanes, midway between Timaru and Temuka
- SH1: Winchester Passing Lanes, north of Temuka
- SH1: Tirohanga Southbound Passing Lane, north of Kaikoura
- SH1: Kekerengu Northbound Passing Lane, north of Kaikoura
- SH1: Hinds Passing Lanes, south of Ashburton
- SH1: Ealing Passing Lanes
- SH1: Rangitata North and South Passing Lanes, south of Ashburton
- SH1: Otari North and South Passing Lanes, south of Ashburton.

Construction of these passing lanes will complete passing lane strategies for SH1 between Kekerengu and Timaru.

Walking and Cycling

A number of cycling projects have been planned for construction in the next three years. It is proposed to construct a cycleway on the Boyle River Bridge on SH7 and Transit proposes to contribute to a link between SH75 and the Christchurch-to-Little River Cycleway. In addition, investigations are proposed:

- to improve cycle facilities on state highways within urban Christchurch
- to safely accommodate cyclists on both the School River (SH7) and Jed River (SH1) bridges.

Weighstation

An upgraded vehicle compliance station, incorporating a stock effluent disposal site, has been constructed at Glasnevin 3 kilometres south of the SH1/SH7 junction. The new station will replace an existing weighbridge in the same locality.

MAINTENANCE and OPERATIONS

In addition to maintaining current and future levels of service, and preserving the asset, Transit proposes to:

- improve the availability of road condition information to road users at critical points on the network by the use of electronic variable mileage signposting
- introduce thermal mapping of the inland network to better predict where icing will occur
- introduce more road weather stations to improve road condition predictions and maintenance team responses to ice and snow, and continue to trial the use of the de-icer CMA (calcium magnesium acetate)
- continue to work and prioritise its work accordingly on risk analysis of rock falls and river erosion as threats to safety and route security occur
- implement retrofitting works on a number of bridges on the network to reduce 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 works within the national parks represent world best practice.

Table C1

Forecasts of Expenditure on Maintenance and Improvements

Canterbury Region

	04/05 ($M)	05/06 ($M)	06/07 ($M)	07/08 ($M)	08/09 ($M)	09/10 ($M)	10/11 ($M)	11/12 ($M)	12/13 ($M)	13/14 ($M)	Total ($M)
Maintenance											
Structural	15.7	18.3	20.5	18.3	18.8	18.8	22.2	24.4	26.2	27.3	210.4
Corridor	6.4	7.0	7.4	7.6	7.8	8.3	8.8	9.2	9.6	9.9	81.8
Professional Services	2.5	3.2	3.4	3.6	3.8	4.0	4.3	4.5	4.7	5.0	39.1
Property Management	0.3	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	9.6
Preventive Maintenance	0.0	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	2.4
Emergency Works	0.0	1.7	1.8	1.7	1.8	1.8	2.0	2.1	2.2	2.2	17.4
Sub-total	24.8	31.2	34.3	32.5	33.4	34.2	38.6	41.6	44.1	46.0	360.6
Improvements											
Minor Safety Projects	2.0	2.3	2.5	2.4	2.4	2.5	2.8	3.0	3.2	3.4	26.5
Committed Projects	10.9	3.6	0.0	0.0	-	-	-	-	-	-	14.5
New Projects	6.2	5.0	4.8	4.8	4.6	4.5	20.4	25.7	34.9	24.1	135.0
Property Purchase	4.7	4.9	5.0	5.2	5.3	5.5	5.7	5.8	6.0	6.2	54.3
Walking & Cycling	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.0
Sub-total	23.9	15.9	12.4	12.4	12.5	12.6	29.0	34.7	44.2	33.8	231.3
Regional Distribution Funding	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	tbd	
Total	48.7	47.1	46.7	44.9	45.8	46.7	67.6	76.2	88.3	79.8	591.9

tbd = to be determined