

## EXECUTIVE SUMMARY

Transit's forecasts of expenditure on the West Coast for the next 10 years are set out in Table WC1.

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 might change, for example, as a result of changes in funding availability and delays in project development.

Major features of the West Coast 10-year plan are:

- › Otira Rail Underpass Replacement on SH73, currently under construction
- › three safety improvements, for construction in the next three years, comprising:
  - » Iron Bridge and approaches realignment on SH6 in the Upper Buller Gorge
  - » Littlemans Straight South Curve Realignment on SH6 between Harihari and Whataroa
  - » Dawson to Tindals Creek Guardrail on SH7 between Maruia Springs and the summit of Lewis Pass
- › another stock effluent disposal facility at Hokitika on SH6, for construction in 2003/04
- › cycle facilities on the Bullock Creek and Pororai River bridges on SH6 near Punakaiki, for construction in 2004/05
- › an investigation of cycle facilities for the Arahura and Taramakau bridges on SH6, and between Fox Township and the Fox Glacier Road.

## BACKGROUND

The state highway network forms the essential backbone for land transport on the West Coast. Significant improvements to SH73 through Arthur's Pass in recent years have greatly enhanced the reliability and capacity of this lifeline corridor which links the West Coast and Canterbury.

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, particularly recognising the often difficult terrain on the West Coast. No major improvements are planned for the next 10 years and the emphasis instead will be on maintaining existing levels of service with minor safety improvements where necessary.

### Recent Improvements

A number of significant improvements have been undertaken to state highways on the West Coast in recent years, mainly on SH73. The most significant of these have been:

- › SH73: Otira Viaduct, west of Arthur's Pass
- › SH73: Candys Bend Realignment, west of Arthur's Pass
- › SH6: Station Creek Bridge Replacement, at Maruia
- › SH6: Jacobs River Bridge Replacement, south of Fox Glacier

### Current Improvements

Replacement of the Otira Rail underpass on SH73, immediately west of the Otira River Bridge, is currently under construction to eliminate the substandard vertical clearance and safety problems associated with the current single-lane underpass.

### PROPOSED IMPROVEMENTS

The locations of West Coast projects in the 10-year plan are shown on Figure WC and the expected cost and timeframe for the development and construction of these projects are indicated in Table WC2.

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 3 years.

### Rural Realignments

While the alignment of some sections of rural highway is quite poor, because of the low traffic volumes on the West Coast, improvements to the alignment are generally not warranted. Accordingly, at current funding levels, few rural realignments are proposed.

### Bridge Replacements

The two major deficiencies on SH6 between Greymouth and Hokitika are the one-lane road/rail bridges at Arahura and Taramakau. These bridges cause traffic delays in peak holiday periods and are a hazard to motorists and cyclists. Both have over-dimensional restrictions on heavy vehicles.

Each bridge would cost about \$8M to replace and the crash rates and delays at these bridges, and the restrictions on heavy vehicles, do not warrant their replacement within the next 10 years at current funding levels. Crashes and delays at these sites will continue to be monitored and the possibility of replacing these bridges in the next 10-years will be kept under review.

### Safety Improvements

Small and medium-sized safety improvements planned for construction in the next three years on the West Coast are as follows:

- › SH6: Iron Bridge and Approaches Realignment, in the Upper Buller Gorge
- › SH6: Littleman Straight South Curve Realignment, between Harihari and Whataroa
- › SH7: Dawson to Tindals Creek Guardrail, between Maruria Springs and the summit of Lewis Pass

## Route Security

The major threats to the route security of state highways on the West Coast are at Franz Josef and the Gates of Haast River Bridge on SH6. At Franz Josef the bridge on SH6 over the Waiho River is threatened by aggradation of the riverbed. This threat to the bridge is being constantly monitored.

The northern abutment of the Haast River Bridge is also threatened by the degradation of the Haast River bed. The need to replace this bridge in the next 10 years is to be further investigated.

## Passing Opportunities

While passing opportunities are often limited by the alignment of state highways on the West Coast, at current traffic volumes the provision of passing lanes on steep grades is not warranted. Opportunities will continue to be explored for incorporating slow vehicle bays on steep grades in conjunction with other works.

## Stock Effluent Disposal Facilities

In accordance with the plan agreed with local authorities, a stock effluent disposal facility is to be constructed at Hokitika on SH6.

## Urban Areas

State highways on the West Coast pass through Westport, Greymouth, Hokitika, Reefton and other smaller urban areas. SH6 through Greymouth was recently upgraded at the Tainui Road intersection.

No other major improvements to state highways in urban areas on the West Coast are proposed but Transit will continue to work with Buller, Grey and Westland district councils to improve the streetscaping of state highways in urban areas, especially in “main streets”, and on threshold treatments on the approaches to rural townships.

## Walking and Cycling Facilities

Cycling improvements which have been included in the plan are:

- › SH6: Bullock Creek Bridge Cycleway, Punakaiki
- › SH6: Pororai River Bridge Cycleway, Punakaiki

It is also proposed to investigate safety improvements for cyclists on the Arahura and Taramakau river bridges, and for pedestrians and cyclists on SH6 at Fox Glacier Road.

## MAINTENANCE and OPERATIONS

In addition to undertaking maintenance and improvements to meet current and future levels of service, and to preserve the asset, Transit proposes to:

- › improve road condition information to road users at critical points on the network
- › introduce thermal mapping of the inland network to better predict where icing will occur
- › introduce more road weather stations to improve emergency responses to ice and snow and continue to trial the use of the de-icer CMA (calcium magnesium acetate)
- › continue to monitor the behaviour of the Waiho River at Franz Josef on SH6 and take appropriate action to ensure the route remains secure
- › continue to work on a risk analysis of rock falls and river erosion to protect safety and route security
- › implement risk-reduction works on bridges throughout the network to reduce the vulnerability of bridges in the event of a severe earthquake
- › work with the Department of Conservation to ensure that maintenance works within the national parks represent world best practice.

**Table WCI**

**Forecasts of Expenditure on Maintenance and Improvements**

**West Coast Region**

|                        | 03/04<br>(\$M) | 04/05<br>(\$M) | 05/06<br>(\$M) | 06/07<br>(\$M) | 07/08<br>(\$M) | 08/09<br>(\$M) | 09/10<br>(\$M) | 10/11<br>(\$M) | 11/12<br>(\$M) | 12/13<br>(\$M) | Total<br>(\$M) |
|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Maintenance</b>     |                |                |                |                |                |                |                |                |                |                |                |
| Structural             | 6.3            | 6.5            | 6.6            | 6.7            | 6.8            | 7.0            | 7.1            | 7.3            | 7.4            | 7.6            | 69.2           |
| Corridor               | 2.9            | 3.1            | 3.2            | 3.4            | 3.5            | 3.7            | 3.9            | 4.0            | 4.2            | 4.4            | 36.3           |
| Professional Services  | 1.5            | 1.5            | 1.6            | 1.6            | 1.6            | 1.7            | 1.7            | 1.7            | 1.8            | 1.8            | 16.5           |
| Property Management    | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            | 0.0            |
| Preventive Maintenance | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.2            | 0.3            | 0.3            | 0.3            | 0.3            | 2.5            |
| Emergency Works        | 0.4            | 0.7            | 0.7            | 0.7            | 0.7            | 0.7            | 0.8            | 0.8            | 0.8            | 0.8            | 7.1            |
| Sub-total              | 11.3           | 12.0           | 12.3           | 12.6           | 13.0           | 13.3           | 13.7           | 14.1           | 14.5           | 14.9           | 131.6          |
| <b>Improvements</b>    |                |                |                |                |                |                |                |                |                |                |                |
| Minor Safety Projects  | 0.4            | 0.4            | 0.5            | 0.5            | 0.5            | 0.5            | 0.5            | 0.5            | 0.5            | 0.5            | 4.9            |
| Committed Projects     | 0.0            | 0.0            | 0.0            | 0.0            | -              | -              | -              | -              | -              | -              | 0.0            |
| New Projects           | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.4            | 0.5            | 0.5            | 4.2            |
| Property Purchase      | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.1            | 0.8            |
| 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              | 1.0            | 1.0            | 1.0            | 1.0            | 1.1            | 1.1            | 1.1            | 1.1            | 1.2            | 1.2            | 10.9           |
| <b>Total</b>           | 12.3           | 13.0           | 13.4           | 13.7           | 14.0           | 14.4           | 14.8           | 15.2           | 15.6           | 16.1           | 142.5          |