

Finance and Operational Performance Committee

**Thursday, 12 December 2002
Commencing at 9.30 am**

**Item 19: Integrated Traffic
 Management for the
 Auckland Metropolitan Area -
 Memorandum of
 Understanding for
 Participants**

**SUPPLEMENT TO AGENDA FOR AN ORDINARY MEETING OF THE FINANCE AND
OPERATIONAL PERFORMANCE COMMITTEE TO BE HELD IN THE CIVIC
CENTRE, 6 WAIPAREIRA AVENUE, LINCOLN, WAITAKERE CITY,
ON THURSDAY, 12 DECEMBER 2002
COMMENCING AT 9.30 AM.**

PART V - GENERAL

**19 INTEGRATED TRAFFIC MANAGEMENT FOR THE AUCKLAND METROPOLITAN
AREA: MEMORANDUM OF UNDERSTANDING FOR PARTICIPANTS**

PURPOSE OF THE REPORT

This report informs the Finance and Operational Performance Committee on progress with Integrated Traffic Management for the Auckland Metropolitan Area and recommends endorsement of action taken to reach agreement on a Memorandum of Understanding for the participants.

BACKGROUND

The Chief Executives Forum for the Auckland Territorial Authorities and the Transit New Zealand Authority has agreed to work towards Integrated Traffic Management for the Auckland Region, and has established a working party of officers for that purpose.

A63-A79 The working party has produced a Memorandum of Understanding of the participants' intentions for Integrated Traffic Management and its implementation. A copy is reproduced and attached at pages A63 to A79.

The Memorandum was approved by the Chief Executive Officers of the Auckland, North Shore, Manukau, and Waitakere City Councils on the 19 November 2002, and the Transit New Zealand Authority's approval will follow.

STRATEGIC CONTEXT

Policy 3.3 of the draft Auckland Regional Land Transport Strategy 2002, 'Improve the Management of Roads', includes Policy 3.3.3:

'continue to develop and implement an Integrated Traffic Management System to optimise the safety, operational efficiency, and asset management of the network in the region. This includes establishing a Traffic Management Unit to manage the metropolitan network under agreements with the participating authorities' Partnership of ACC, ARC, MCC, NSCC, Transit, and WCC.

Waitakere City's Urban Villages Pathway to a sustainable city includes the policy objective that:

'people can get easily and safely to where they need to go by walking, cycling, passenger transport, or private vehicle, and businesses can efficiently move their goods and services'.

The draft Memorandum of Understanding is generally consistent with these regional and territorial transport policy points. Indeed, the primary objective expressed in the Memorandum of Understanding is to:

'integrate the traffic control systems of each participant with the principal objective of optimising the safe and efficient movement of people, goods and services on the Auckland metropolitan area's transport network in a manner consistent with national, regional and district strategies'.

ISSUES

Provision for Integrated Traffic Management

Integrated Traffic Management will be provided through the efforts of a Traffic Management Unit under the direct employ of Transit New Zealand on behalf of all the participants.

Traffic flows will be managed using enhanced traffic signal coordination and variable-message electronic-signs. Also, special provision will be made for bus movements in terms of the Memorandum of Understanding for Signal Pre-emption and Real Time Passenger Information, already adopted by Waitakere City Council and other Auckland Territorial Authorities.

Transit owns a major traffic control centre. This is located in the previous Harbour Bridge Authority's headquarters near the north end of the Auckland Harbour Bridge. It is manned 24 hours 7 days a week. The operators observe traffic conditions along the motorways through video cameras and respond by sending messages to drivers using variable-message electronic-signs, and by sending radio-messages to highway patrols.

Auckland, North Shore, Manukau and Waitakere Cities each own and operate video-camera stations and/or advanced signal coordination systems, known as SCATS. Waitakere City operates SCATS only. SCATS detects traffic flows at intersections and adjusts green signals to optimise traffic progression.

These separately owned systems are to be connected by fibre-optic cables to a new master computer. Computers and operators will continue under the auspices of the Traffic Management Unit to process information and apply the results to the achievement of optimal traffic conditions.

Level of Service

Levels of service for traffic would be negotiated with the participants, from time to time, to suit changing regional and local requirements. The Traffic Management Unit would operate the control systems to achieve the negotiated 'Level of Service'.

Some authorities define Level of Service for routes in terms of average travel speed and grade it A, B, C, D, E, F (best to worst). For example, A through F might be defined for arterials, with a 60 km/hr free speed, as greater than 50 km/h, 39 km/h, 28 km/h, 22 km/h, 17 km/h, and less than 17 km/h, respectively. Under this scheme, the am peak Level of Service for Rata Street ~ Titirangi Road westbound, is now B, the average speed being 45 km/h.

Average speeds are mainly determined by the frequency, timing and duration of green signals, and messages to drivers. The achievement of optimal green signalling and messaging would be the prime operational objective of the Traffic Management Unit.

The Memorandum of Understanding allows for the development of agreed Level of Service criteria, and preliminary formulations are now being prepared for consideration.

Ownership and Development of Infrastructure

Council would retain ownership of and control the development of its roads and traffic management infrastructure.

There is a limit to the Level of Service that can be achieved through the existing signal system and road network. Ultimately, more signals, cameras and variable signs, more traffic lanes and/or road connections may be required for satisfactory levels of service.

The Traffic Management Unit would be well placed to make recommendations to the participants in regard to infrastructure improvements, and that intention is evident in the Memorandum of Understanding.

Maintenance of Systems

For safe and reliable signalling and messaging, appropriate equipment maintenance and renewal is essential. Council would continue to approve the budget for maintenance and renewal of equipment in its territory.

The work would be delegated to the Traffic Management Unit, and the Traffic Management Unit would arrange appropriate maintenance and renewal contracts. It is expected that efficiencies should accrue through economies of scale, and with supervision coming from a team of professionals dedicated to this special branch of engineering.

Governance

To ensure that each participant's requirements are achieved, the Memorandum of Understanding provides for the Traffic Management Unit to be governed by an Executive Group comprised of senior representatives of the participants. This provision appears to significantly mitigate the risk of the Traffic Management Unit becoming insensitive to Local Strategies in the interest of maximising rather than optimising the efficiency of traffic movement.

Costs and Benefits

Council's present estimated costs are tabled below:

ITEM	DESCRIPTION	\$ PER YEAR
1	Transport Assets Salaries	39,000
2	Transport Assets Overheads	57,000
3	WCC Consultancy Services Fees	36,000
4	RMKH Consultancy Fees	30,000
5	TTS Signal Maintenance Contract	144,000
6	Telecom Data-lines Rental	102,000
7	Electric Power Charges	42,000
8	Renewal Costs (a)	200,000
	TOTAL	650,000

Note (a): Level of renewal proposed by Waitakere City Council Officers for Annual Plan 2003/2004.

It likely that under the arrangements proposed for Integrated Traffic Management Council's costs for existing signal systems operation, maintenance and renewal, may be reduced by in the order of \$65,000 per year, 10%.

It will cost about \$80,000 to connect Council's fibre-optic cabling in Central Park Drive to Transit's fibre-optic cabling in the North Western motorway reserve. Cost sharing for this is being negotiated.

Transit as the managing participant of the Traffic Management Unit has already resolved that costs will be shared in proportion to the benefits received, and a cost sharing arrangement is being developed.

The benefits of optimally coordinated signals and messages are known to be large in comparison with the benefits of an average operation. This is the reason for proceeding to Integrated Traffic Management in the Auckland Region.

Council needs to consider providing video-camera stations at 2 or 3 key locations in order to take advantage of the 24 hour times 7 days manning of the traffic control centre. A provision is to be made for this in the proposed 2003/2004 annual plan.

Another benefit of Integrated Traffic Management will be reduced risk to Council in regard to the operation of SCATS. The Traffic Management Unit will have multiple staffing, whereas Council's SCATS contractor firm comprises a single expert person.

Timing

It is expected that:

1. Waitakere SCATS would be linked to the regional computer in this 2002/2003 year, for monitoring and Level of Service development purposes.
2. Waitakere maintenance and renewal contracts for signal equipment and SCATS would be discontinued at the end of this 2002/2003 year and taken up by the Traffic Management Unit for the 2003/2004 and subsequent years, day-to-day operation of Waitakere SCATS would be taken up by the Traffic Management Unit for the 2003/2004 year and beyond.

RESOURCES

The change to Integrated Traffic Management in accordance with the proposed Memorandum of Understanding is expected to somewhat reduce the costs and substantially increase benefits of signal coordination in Waitakere City. However, there will be reduced payments to Council's Consultancy Services Business Unit, about \$36,000 annually, owing to maintenance and renewal contracts being managed by the Traffic Management Unit instead.

Approval of the Memorandum of Understanding does not commit Council to entering into specific contracts at this stage, but is the first step in developing the levels of service and cost shares. The Council's representative on the Executive Group would bring back firm proposals for recommendation to and approval by Council.

CONCLUSION

The proposed memorandum of understanding for integrated traffic management in the Auckland Region is the key to delivering improved levels of service to road users, including passenger transport users, and with potential cost reductions for the participants.

This comes with less risk to Council in regard to inferior system performance or failure, facility for Council to negotiate service levels that are consistent with its local strategies, and facility for Council, through its membership of the Executive Group, to participate in the direction of the Traffic Management Unit's activity.

Council would remain in control of the development its transport assets and yet have advice available from the dedicated team of traffic management professionals staffing the Traffic Management Unit.

RECOMMENDATIONS

1. That the information be received.
2. That the Finance and Operational Performance Committee congratulate the Working Party and the Chief Executives on completing the Memorandum of Understanding for Integrated Traffic Management in the Auckland Region.

Report prepared by: Ross Hill, Service Manager Transport Assets.

