

6. MAIDSTONE ROAD/WAIMAIRI ROAD INTERSECTION IMPROVEMENT

RR 9554

Officer responsible City Streets Manager Mark Gordon	Author Bill Greenwood, Transportation Safety Engineer
Corporate Plan Output: Maidstone Road/Waimairi Road Traffic Signals Installation \$188,000	

INTRODUCTION

The purpose of this report is to consider options for capacity improvements at the intersection of Maidstone Road and Waimairi Road.

The location of this intersection places it on the boundary between the Riccarton/Wigram Community Board and the Fendalton/Waimairi Community Board and therefore in addition to the City Services Committee, this is a significant matter of concern for both Boards.

A seminar involving Board members and members of this Committee was held on 19 March 1999. The recommendation of this report was outlined at the seminar and referred to the two Community Board meetings for recommendation to this Committee.

Traffic congestion at the Waimairi Road/Maidstone Road roundabout has been a matter of concern for a number of years. The congestion delays are caused by unbalanced traffic flows during the morning and evening peak periods.

The type, design and extent of improvement to be constructed at the Waimairi/Maidstone intersection is very dependent on any potential changes to the nearby Wadeley Road that limit the movement of through traffic along it. For this reason the City Services Committee supported the view that any proposal for the restriction of traffic movement through Wadeley Road be treated as an integral part of this intersection's improvement.

This report discusses several options for addressing the congestion, their merits and issues as well as estimated funding and programme implications.

BACKGROUND

Congestion at this intersection is caused by unbalanced traffic flows during the morning and evening peak periods. During the morning peak period the major traffic flows are south bound on Waimairi Road and east bound on Maidstone Road. This movement results in vehicles heading south on Waimairi Road having to give way to traffic at the roundabout which is on their right. This causes queuing on Waimairi Road back to the Grahams Road roundabout. In the evening period the flows are reversed and the Waimairi Road north bound major movement is required to give way to the Maidstone Road west bound traffic. This situation favours Avonhead traffic causing considerable delays to the ring road. The situation has deteriorated to an extent that the vehicles on Waimairi Road in the evening period are queuing back to Peer Street.

In addition to the problems at Waimairi Road the community has expressed concern regarding the amount of traffic short cutting through Wadeley Road. Wadeley Road is an unclassified local road carrying around 4,700 vehicles per day. A number of years ago the Council installed a threshold treatment at the Waimairi Road/Wadeley Road intersection to discourage short cutting traffic in this area. Drivers are experiencing

problems making the right turn from Waimairi Road into Wadeley Avenue and injury crashes have been recorded.

The business community is concerned that any changes to the Maidstone/Waimairi intersection does not unnecessarily impinge on the viability of their businesses. Any loss of frontage car parking in this area is likely to be seen as a disbenefit by the adjacent business community and the property owner.

In 1994 the Waimairi Board members visited the site to survey the traffic patterns and discuss of the residents' and business owners' concerns. As part of their budget proposals the Board's requested that funding for traffic signals be included in the budget. An amount of \$ 188,000 is included in this year's budget for the installation of traffic signals at the intersection. This level of funding was based originally on a concept design that excludes any further traffic calming effects from Wadeley Road.

Subsequent discussions with the Riccarton/Wigram Board have focused on the desirability of installing strong traffic restraint measures in Wadeley Road. Such traffic restraint would mean that significant additional traffic would be diverted through the Maidstone/Waimairi intersection. Major modifications are required to the initial traffic signal proposal in order to cater for this diverted traffic.

OPTIONS

Six options have been put forward for consideration here with respect to their merits in addressing the objectives and issues. They are categorised into two distinct groups viz. Firstly, those which deal with Wadeley Road remaining open to traffic currently using it and secondly, those which would accommodate the additional traffic created by the restriction of traffic through Wadeley Road:

- With Wadeley Road remaining open to through traffic:
 - Option 0 Do nothing – ie retain the existing layout.
 - Option 1 Budgeted option - Installation of traffic signals with the loss of five customer car parks \$188,000 B/C 15.1.
 - Option 2 Installation of traffic signals with no loss of customer parking \$250,000 B/C 11.
 - Option 3 Installation of a dual laned roundabout with reduced customer parking \$852,000.
- With through traffic movement along Wadeley Road restricted:
 - Option 4 Installation of traffic signals with reduced customer parking \$850,000.
 - Option 5 Installation of traffic signals with reduced customer parking and designed to four lane median divided standard \$850,000.

The analysis undertaken for this report attached (Appendix A) shows that traffic signals can be installed at this intersection within the existing budget if Wadeley Road remains open to through traffic. The traffic signals will have a design life of almost 10 years before any further improvements are required.

If through traffic movements along Wadeley Road are to be restricted then the installation of traffic signals to cater for the additional traffic flows would require further land purchase, and would also result in the loss of a number of customer car parks at the shopping centre.

Construction of a dual laned roundabout at the intersection is only feasible if Wadeley Road remains open to through traffic. This would require additional land purchase and result in the loss of a number of customer car parks at the shopping centre. This option is not recommended by the report because of the adverse safety environment it would create for pedestrians and cyclists.

The conclusions of the report are that:

- If Wadeley Road is to remain open to through traffic then Option 2 - the installation of traffic signals at the intersection should proceed with out the loss of any car parks in front of the shops. To install traffic signals with out loss of customer car parks will require a request for additional funding of \$62,000.
- If through traffic movements along Wadeley Road are to be restricted then Option 5 – the installation of traffic signals to 4 lane median divided standard with the loss of some customer car parks at the shopping centre should be planned for through the normal planning process. This option requires land purchase that would need to be purchased directly or designations put in place for its purchase.
- The Option 2 traffic signals have a design life of about 10 years. The required planning and land purchase to install the Option 5 traffic signals could take some 3 to 5 years. In this case it would appropriate planning practice to install the Option 2 traffic signals and reassess the downgrading of through traffic movement along Wadeley Road in 10 years time at the end of the design life of the Option 2 traffic signals.

- Recommendation:**
1. That the proposal to install the Option 2 traffic signals at the Maidstone/Waimairi intersection proceed without the loss of car parks in front of the shops.
 2. That planning and consultation for the restriction of the traffic volume on Wadeley Road in conjunction with associated capacity improvements at the Maidstone/Waimairi Intersection continue.
 3. That the additional \$62,000 required for the Option 2 proposal be funded from within the City Streets Unit's capital works programme.

Chairman's Recommendation: That the above recommendation be adopted.