

3. GLOUCESTER/LINWOOD PROPOSED TRAFFIC SIGNALS

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The purpose of this report is to obtain approval to seek the community views on a proposal to install traffic signals at the Linwood/Gloucester intersection. The report provides background to the project and discusses options that could improve safety and reduce delays at the intersection. The preferred option involves removal and relocation of a number of trees. A report on the trees accompanies this report and requires separate decisions. This report recommends that the community view be sought regarding the proposal to install traffic signals at the above intersection.

BACKGROUND

This intersection forms a capacity constraint on a significant route east of the city. Linwood Ave is a major arterial east west route between Avonside and Mt Pleasant. It currently carries around 10,500 vehicles a day east of the intersection. Gloucester St is a minor arterial route providing access between north Linwood and Wainoni with the City Centre. Gloucester St south of Linwood Ave carries around 8,100 vehicles per day. The total traffic volume through the intersection is very high for a round-a-bout with the current lane configuration. Traffic crossing and turning at the intersection currently experience considerable delays especially during peak periods.

Cycle and pedestrian activity is moderate with the majority of cycles being associated with adjacent intermediate and secondary schools. Both Linwood Ave to the east intersection and Gloucester St are bus routes. The number 30 Sumner and 43 New Brighton use this intersection.

Safety issues are an important consideration at this intersection. 18 crashes have been reported at the intersection between 1997 and 2001. Of these crashes, two involved serious injury, 4 minor and 11 were recorded as non-injury accidents. The most regular problem (6) involved vehicles crossing at right angles. Other crashes were varied with no dominant crash type. This reflects the complex unusual layout of the intersection.

Previous changes at Worcester St/Linwood Ave removed cross movements on Worcester St. This resulted in some additional "U" turns at the Gloucester St intersection. It is acknowledged that the proposed changes will cause increased difficulties for drivers wishing to undertake "U" turns at Gloucester St. For this reason the median island in this area is designed to assist "U" turning vehicles.

DISCUSSION

Installation of traffic signals appears to be the only viable option. The angles of the approach roads restrict changes to the approach geometry of the existing roundabout. Significant land purchase would be required to realign the roads and to construct a suitable two-lane roundabout. Such a change would also affect significant trees on Linwood Ave west of the intersection.

The proposed installation of traffic signals will have a number of advantages. The signals will reduce delays at the intersection especially for the large number of vehicles turning right from Linwood Ave into Gloucester St north. The proposed changes are also likely to significantly improve safety at the intersection. Cyclists and pedestrians will also benefit from the provision of cycle lanes and pedestrian facilities at the revised intersection. Installing traffic signals will involve the removal and relocation of trees in the roundabout and the median east of the intersection. This issue is discussed in another report to this committee

The most appropriate phasing for the signals will be considered once the intersection is operational. If the need to provide a separate phase for an approach is identified, sufficient capacity is proposed to allow this to occur. \$300,000 is included in the council capital works budget for the installation of traffic signals as shown on the attached plan. The project has a benefit cost ratio of 35 and a first year rate of return of 283%.

CONCLUSION

Delays and associated problems at the Gloucester/Linwood intersection have been of considerable concern to the community and the council for a number of years. The option of improving the existing roundabout to provide safer approaches and increased capacity has been investigated but is not considered a viable option.

The installation of traffic signals is proposed to address the safety and capacity concerns at the intersection. Before proceeding with the installation of traffic signals it is suggested that the community views be sought.

Staff

Recommendation: That the community views be sought on the proposal to install traffic signals at the Gloucester/Linwood intersection.

Chairman's

Recommendation: Not seen by the Chairperson