21. CYCLE FACILITIES AT FERRY/FITZGERALD INTERSECTION

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Corporate Plan Output: 9.5.text.57	

The purpose of this report is to advise the City Service Committee of an innovative cycle facility proposed for the Ferry Road / Fitzgerald Avenue intersection.

DEFINING THE PROBLEM

All of the streets that cross Bealey Ave, Fitzgerald Ave, Moorhouse Ave or Brougham Street require the crossing traffic, cyclists or pedestrians to cross at least six vehicle lanes and a wide median - total approximately 33m. This distance is about 60% wider than the average central city street crossing.

The traffic signal cycles and timing are structured so that a vehicle travelling at a slower than normal speed on a cross street, entering the intersection as soon as it the light turns amber, will be clear of the intersection before the vehicles on Moorhouse, Bealey etc, start to move.

However, cyclists typically travel slower than vehicles. It is quite conceivable that when a cyclist enters the intersection as the lights turn amber, he/she could STILL BE IN THE MIDDLE OF THE INTERSECTION when the crossing traffic starts. Collision records would indicate that at least a couple of cycle injury collisions have been caused by cyclists being in the way of starting traffic. Both of the attached photos show the difficulties a cyclist is in when he started into the intersection a second before the lights turned to amber.

A member of the City Council's City Design Unit (Axel Wilke) has developed a unique traffic signal detection system that can improve the safety of cyclists crossing very wide intersections.

POSSIBLE TREATMENTS

A number of possible treatments have been examined and rejected. These all relate to extending the length of time for the amber signal on the side street, or extending the length of time that the red shows in both directions (typically 1 or 2 seconds). In both of these situations, vehicle drivers tend to learn the delays built in to the system and take advantage of it, either by starting early on the all-red time, or not stopping early on the amber light. In addition, extending the overall traffic signal cycle by a few seconds on each cycle will throw the co-ordination on the one-way system into havoc, and probably create more road safety hazards than solutions.

PREFERRED TREATMENT

The preferred treatment is one that detects when a cyclist is in the middle of crossing the wide intersection, and if the opposing signals are still red, will KEEP THEM RED for a further couple of seconds to allow the cyclist to cross to the other side.

This technique uses two detector loops placed before and adjacent to the median island. They will be marked with a cycle logos which will encourage cyclists to ride over the logo each time they are crossing through the intersection. If they cross the loops at a certain (slow) speed, when their facing light is amber or red, and the crossing traffic's light is also red, both lights will then remain red for several additional seconds to allow the cyclist to cross.

It is acknowledged that there will be a slight extension to the all-red time when a cyclist triggers the system. However, it is unlikely the system will be triggered every signal phase. The co-ordination system will be able to accommodate the occasional interruption to the normal cycle times.

TRIAL INSTALLATIONS

It is intended to trial this installation at the Ferry/Fitzgerald intersection. The Hagley/Ferrymead Community Board is discussing the marking changes necessary to Ferry Road, and will be recommending the appropriate changes to parking restrictions to Council.

It will be possible to monitor the number of times the cycle detection process operates, and there will be thorough checks to ensure that the installation is working as intended. It is proposed to report back on the trial after six months operation.

Chairman's Recommendation: That the information be received.