

COMMITTEE OF THE WHOLE – JUNE 21, 2004

**MARTIN GROVE ROAD AND BAINBRIDGE AVENUE / CLAUDIA AVENUE
MARTIN GROVE ROAD AND FOREST DRIVE
TRAFFIC SIGNAL REVIEW**

Recommendation

The Commissioner of Engineering and Public Works recommends:

That traffic control signals not be installed at the intersections of Martin Grove Road and Bainbridge Avenue / Claudia Avenue and at Martin Grove Road and Forest Drive.

Purpose

To report on the results of the traffic signal warrant studies at the intersections of Martin Grove Road and Bainbridge Avenue / Claudia Avenue and at Martin Grove Road and Forest Drive, in response to a request received from an area resident.

Background - Analysis and Options

On April 2, 2004 there was a fatality where a pedestrian was struck by a vehicle while crossing Bainbridge Drive at Roxana Avenue by the St. Peter's Church. The collision occurred near the east driveway of the church approximately 90 metres east of Martin Grove Road. Following this incident, on April 29, 2004 a letter was sent to the Mayor requesting traffic signals for the nearby intersection of Martin Grove Road and Bainbridge Avenue / Claudia Avenue. This incident was not at an intersection where traffic signals were requested and would not necessarily have been preventable through installation of traffic signal control. In addition, Engineering staff were requested to review the feasibility of installing traffic signals at the intersection of Martin Grove Road and Forest Drive.

Martin Grove Road is a four lane collector road with a 50 km/h speed limit. At the present time both subject intersections are controlled by an all-way stop control. There is a school crossing guard on the north approach at the Martin Grove Road and Bainbridge Avenue / Claudia Avenue intersection and on the south approach at the Martin Grove Road and Forest Drive intersection. The school crossing guards assist students crossing Martin Grove Road.

The subject intersections have been reviewed in past years. The common concerns raised are in regards to pedestrians crossing Martin Grove Road to and from the St Clements Elementary School and the Father Emmano Bulfon Community Centre. The past traffic signal warrants and the current traffic signal warrants are summarized in the tables below.

Martin Grove Road and Bainbridge Avenue / Claudia Avenue

Date of Study	Minimum Vehicular Volume	Delay to Cross Traffic	Collision Hazard
September 12, 2000	53%	61%	0%
December 11, 2001	49%	64%	27%
May 18, 2004	53%	69%	13%

Martin Grove Road and Forest Drive

Date of Study	Minimum Vehicular Volume	Delay to Cross Traffic	Collision Hazard
September 7, 2000	67%	59%	7%
May 13, 2003	72%	53%	20%

May 18, 2004	76%	59%	20%
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In order for a traffic signal to be warranted as per the Provincial Traffic Signal Warrant one or more of the three warrants noted in the above table must be satisfied to 100%. A combination warrant would be met if two of the three warrants are satisfied to 80% or more. Based on the past and present study results, a warrant for traffic signal control at each of the subject intersections is not met.

Other Intersection Observations

Through the recent traffic studies, observations at the Martin Grove Road intersections revealed that there were incidents of non-compliance to the existing all-way stop controls. Stop sign compliance appeared to be low in the north and south directions during the PM peak period. Engineering staff will send a letter to the York Region Police requesting strict and frequent enforcement of the existing stop controls.

The collision history at both intersections was reviewed for the past three years. At Martin Grove Road and Bainbridge Avenue / Claudia Avenue there were two right angle type collisions and three rear end type collisions on the Martin Grove Road approaches. One pedestrian crossing northbound on the east side of the intersection was struck and injured by a southbound left turning vehicle from Martin Grove Road. At Martin Grove Road and Forest Drive there were three right angle type collisions and one left turn type collision.

Comparison with the Recent Traffic Control Signal Installations on Melville Avenue

Engineering staff were requested to compare the intersections on Martin Grove Road to the recent traffic signal installations on Melville Avenue at Avro Road and at Springside Road.

Martin Grove Road and Melville Avenue have similar road characteristics. Both streets are four lane collector roads that serve residential areas. Traffic signals were recently installed at two Melville Avenue intersections. The signalized intersections were in operation in May 2004 after operating under all-way stop control. The warrant results of the two Melville Avenue intersections are shown in the following tables.

Melville Avenue and Springside Road

Date of Study	Minimum Vehicular Volume	Delay to Cross Traffic	Collision Hazard
September 18, 2002	79%	64%	0%
May 6, 2003	79%	62%	0%

Melville Avenue and Avro Road

Date of Study	Minimum Vehicular Volume	Delay to Cross Traffic	Collision Hazard
September 18, 2002	72%	63%	0%
May 6, 2003	65%	63%	0%

Although traffic signal warrants were not met, the Melville Avenue and Springside Road intersection was considered for traffic signal control due to concerns regarding future students crossing Melville Avenue to the Maple High School and the additional traffic generated when the school opens. Similarly, the Melville Road and Avro Road intersection was considered for traffic signals due to increasing development in the area and Avro Road generating higher traffic volumes once it opens to Jane Street. This was initially a tee intersection.

The Melville Avenue area is within a developing community. With continued development, the

increasing traffic on the Creditstone Road, Melville Avenue route and the school opening, it was anticipated that traffic signal warrants would be met. In comparison, the subject Martin Grove Road intersections are within an older, developed community. Traffic growth of the surrounding neighbouring sidestreets is not occurring. It is likely that traffic will not increase in the near future to where the Provincial Traffic Signal Warrants will be satisfied.

Relationship to Vaughan Vision 2007

This traffic study is consistent with Vaughan Vision 2007 as to identify and implement innovative traffic management alternatives to improve general traffic safety (1.1.3).

This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

Conclusion

Based on staff's review, it is recommended that traffic signals not be installed at the intersections of Martin Grove Road and Bainbridge Drive / Claudia Avenue and at Martin Grove Road and Forest Drive.

Attachments

1. Location Map

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MG/fc

ATTACHMENT No. 1

