MARKHAM

Report to: General Committee

Date Report Authored: May 6, 2013

SUBJECT: Castlemore Avenue & Williamson Road Proposed All-way Stop Control

PREPARED BY: Musa Deo, Traffic Operations Technologist, ext. 2736
David Porretta, Traffic Operations Supervisor, ext. 2040

RECOMMENDATION:

1) That the report entitled "Castlemore Avenue & Williamson Road Proposed All-way Stop Control", be received;

2) And that Schedule 12 of Traffic By-law 106-71, pertaining to compulsory stops, be amended to include all approaches to the intersection of Castlemore Avenue & Williamson Road;

3) And that the Operations Department be directed to install the appropriate signs and pavement markings at the subject locations;

4) And that the cost of materials and installation for the traffic signs and pavement markings be funded from capital project # 11305 (Traffic Operational Improvements) in the amount of $500;

5) And that York Region Police be requested to enforce the all-way stop control upon installation of these stop signs and passing of the By-law;

6) And that staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

This report recommends implementing an all-way stop at the intersection of Castlemore Avenue & Williamson Road to resolve ongoing intersection safety concerns.

BACKGROUND:

The intersection of Castlemore Avenue and Williamson Road is located in the Greensborough community (see Attachment "A"). Castlemore Avenue is residential collector road with an average daily traffic (ADT) volume of 3,300 vehicles per day and provides direct access to Markham Road in the west and Donald Cousens Parkway in the east. Williamson Road is also a residential collector road, with an ADT volume of 2,000 vehicles. Currently, stop control at the intersection is assigned to Williamson Road only, giving traffic on Castlemore Avenue the right-of-way.

DISCUSSION:

Traffic safety has been an ongoing issue at the subject intersection.

Since 2010, ongoing residential development north and east of this intersection has resulted in increased vehicular and pedestrian activity. During this time, Operations staff has received approximately 20 requests from residents, all expressing concerns about vehicular and pedestrian safety.

School crossing guard service was implemented in September 2012.
In response to pedestrian safety concerns, school crossing guard services were implemented in September 2012, based on Provincial warrant guidelines. Despite the positive reception to the school crossing guard service, Operations staff continues to receive complaints about safety at the intersection.

Staff has been actively monitoring traffic volumes at this intersection since 2010.
Since 2010, Operations staff has been monitoring traffic operations at this intersection on an ongoing basis. Approximately eight (8) site investigations have been conducted over the past three years. Although each site investigation did not identify any particular deficiencies at the intersection, it was apparent that traffic volumes have been steadily increasing over the past three years. As such, traffic counts and all-way stop warrant studies have been conducted in six-month intervals since 2010. While the results of each study have failed to meet the required warrant threshold, results are getting progressively closer to justifying an all-way stop control.

All-way stop control at Castlemore Avenue and Williamson Road is recommended.
An all-way stop control may be considered where provincial warrant guidelines are met, as outlined in the Ontario Traffic Manual. The warrant considers total vehicular volume and volume distribution between the "major" and "minor" approaches of the intersection during the busiest hour of the day.

In April 2013, the Operations Department conducted an all-way stop warrant analysis during the busiest one-hour period of the day (7:30am – 8:30am). The warrant analysis results are as follows:

Figure 1: All-way Stop Warrant Results (April 2013)

CRITERIA #1 Total Traffic Volume *(All Approaches)*			**CRITERIA #2 Volume Assigned to "Minor" Street** *(Williamson Rd.)*		
Minimum Criteria	**Recorded Value**	**Criteria Met?**	**Minimum Criteria**	**Recorded Value**	**Criteria Met?**
350	779	YES	35%	34%	NO

For an all-way stop control to be justified, both Criteria #1 and #2 must be met. While Criteria #1 exceeds the minimum criteria, Criteria #2 falls just one percentage point below the minimum criteria (equivalent to approximately seven vehicles).

Although provincial warrant guidelines were not met, traffic growth trends based on all previous studies indicate that the intersection will meet the all-way stop warrant criteria once the 2013-2014 school year is underway. The traffic growth can be directly attributed to continued residential development and increased student enrollment at Mount Joy Elementary School, located south of the intersection.

Based on the results of the study and traffic growth trends, staff recommends that all-way stop control be implemented at the intersection. This would be done as a proactive measure to ensure that the necessary traffic controls are in place prior to the start of the new school year, thereby

accommodating additional traffic and pedestrian volumes attributed to increased school enrollment and ongoing residential development.

FINANCIAL CONSIDERATIONS:
The cost of materials and installation for the traffic signs and pavement markings in the amount of $500 has been included in the capital project # 11305 (Traffic Operational Improvements). On-going maintenance costs for this installation will be considered in the 2014 Operations Department operating budgets.

ALIGNMENT WITH STRATEGIC PRIORITIES:
This report aligns with the community safety component of Markham's transportation strategic priority.

DEPARTMENTS CONSULTED AND AFFECTED:
Not applicable.

RECOMMENDED BY:

Paul Ingham,
Director, Operations

Brenda Librecz,
Commissioner, Community & Fire Services

ATTACHMENTS:
Attachment "A" – Proposed All-Way Stop Control Location Map
Attachment "B" – All-way Stop Control By-Law Amendment