



Report to: General Committee

Date Report Authored: January 13, 2014

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**SUBJECT:** Proposed All-way Stop Control at Bur Oak Avenue & Swan Park Road

**PREPARED BY:** David Porretta, Traffic Operations Supervisor, ext. 2040

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**RECOMMENDATION:**

- 1) That the report entitled "Proposed All-way Stop Control at Bur Oak Avenue & Swan Park Road", be received;
- 2) And that, to improve pedestrian safety within the school zone, Schedule 12 of Traffic By-law 106-71, pertaining to compulsory stops, be amended to include all approaches to the intersection of Bur Oak Avenue & Swan Park Road;
- 3) And that the existing school crossing guard service be relocated from its current location to the subject intersection upon installation of the all-way stop control;
- 4) And that the Operations Department be directed to install and remove the appropriate signs and pavement markings at the subject locations;
- 5) And that the cost of materials for the installation and removal of applicable traffic signs, pavement markings and boulevard restoration be funded from capital project # 14228 (Traffic Operational Improvements) in the amount of \$2,000;
- 6) 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;
- 7) 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 Bur Oak Avenue and Swan Park Road to resolve ongoing intersection safety concerns.

**BACKGROUND:**

The intersection of Bur Oak Avenue and Swan Park Road is located in the Greensborough community (see Attachment "A"). Bur Oak Avenue is a four-lane major collector road with an average daily traffic (ADT) volume of 6,000 vehicles per day and provides direct access to Markham Road in the west and 9<sup>th</sup> Line in the east. Swan Park Road is a minor collector road, with an ADT volume of 1,500 vehicles. Currently, stop control at the intersection is assigned to Swan Park Road, giving traffic on Bur Oak Avenue the right-of-way. St. Julia Billiard Catholic School is located at the northeast corner of the intersection.

Since 2006, there have been ongoing concerns from residents and administrative staff at St. Julia Billiard Catholic School, expressing concerns about vehicular and pedestrian safety at the

intersection. This has resulted in five individual traffic studies being conducted at the intersection to determine if additional traffic control measures are required at the intersection.

**DISCUSSION:**

**School crossing guard service was implemented in Fall 2006**

In response to prior pedestrian safety concerns, school crossing guard services were implemented on Bur Oak Avenue approximately 50 metres east of the intersection. Although positively received, Operations staff continue to receive complaints about vehicular and pedestrian safety at the intersection.

**Staff have been actively monitoring traffic volumes at this intersection since 2006**

Since 2006, Operations staff have been monitoring traffic operations at the subject intersection on an ongoing basis. Approximately five traffic studies have been conducted at the intersection over the past seven years. Although each site investigation did not identify any particular deficiencies at the intersection, it was apparent that traffic volumes on Bur Oak Avenue have increased. As such, traffic counts and all-way stop warrant studies were conducted, most recently in early December 2013.

**All-way stop control at the intersection does not meet technical warrant criteria**

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 December 2013, the Operations Department conducted an all-way stop warrant analysis during the busiest one-hour period of the day (8:00am – 9:00am). The warrant analysis results are as follows:

**Figure 1: All-way Stop Warrant Results (Dec. 2013)**

CRITERIA #1 Total Traffic Volume <i>(All Approaches)</i>			CRITERIA #2 Volume Assigned to “Minor” Street <i>(Swan Park Rd.)</i>		
Minimum Criteria	Recorded Value	Criteria Met?	Minimum Criteria	Recorded Value	Criteria Met?
350	527	YES	35%	20%	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 below criteria. It should be noted that this is consistent with previous study results. Also, traffic patterns and growth rates in the community do not indicate that the intersection will meet the all-way stop warrant criteria in the foreseeable future.

**All-way Stop Control is recommended to improve safety within the School Zone**

Although provincial warrant guidelines were not met, conflicts between pedestrians and vehicles at the intersection are a legitimate concern. Currently, no collisions involving pedestrians have been officially reported at the intersection. However, multiple site investigations by City staff do

confirm that “near misses” between vehicles and pedestrians is a regular occurrence during the school peak periods. The high risk of pedestrian collisions can be attributed to the amount of activity occurring within the school zone. Drivers and pedestrians are challenged with being able to discern when it is safe to enter the intersection resulting in poor decisions and slow responsiveness to hazardous situations. Further evidence of this is two right-angle collisions that have occurred since 2012, when none had occurred in previous years.

The provision of an all-way stop at the intersection will regulate traffic control at the intersection by requiring all vehicles to come to a complete stop and also give right-of-way to pedestrians that are crossing.

**Relocating the existing school crossing guard service is recommended**

The existing school crossing guard, located approximately 50 metres to the east of the intersection, does not adequately service students that may be approaching the school from the west. Furthermore, if an all-way stop is implemented at the subject intersection, the number of interruptions on Bur Oak Avenue would negatively impact traffic flow and compliance within the school zone. Therefore, it is recommended that the supervised school crossing be relocated to the subject intersection, where it would be more effectively utilized.

**All-way stop control would improve Active Transportation Initiatives at the school**

The school is considering active transportation initiatives to reduce the number of vehicle trips and encourage walking and cycling to the school. The inclusion of an all-way stop at the subject intersection would improve pedestrian safety, thereby encouraging more students to walk.

**FINANCIAL CONSIDERATIONS:**

The cost of materials for the installation and removal of applicable traffic signs, pavement markings and boulevard restoration shall be funded from capital project # 14228 (Traffic Operational Improvements) in the amount of \$2,000. On-going maintenance costs for this work are included in the 2014 Operations Department operating budget.


**ALIGNMENT WITH STRATEGIC PRIORITIES:**

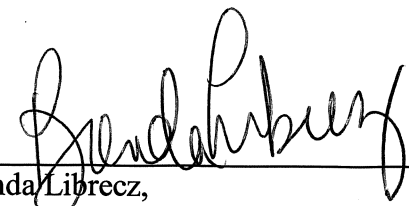
This report aligns with the community safety component of Markham’s transportation strategic priority.

**DEPARTMENTS CONSULTED AND AFFECTED:**

Not applicable.

**RECOMMENDED BY:**

  
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Paul Ingham,  
Director, Operations

  
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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