



Report to: General Committee

Date Report Authored: January 9, 2014

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**SUBJECT:** Request for Traffic Signals - Box Grove Bypass & Riverwalk Drive

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

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**RECOMMENDATION:**

- 1) That the report entitled "Request for Traffic Signals - Box Grove Bypass & Riverwalk Drive" be received;
- 2) And that York Region staff be requested to evaluate the intersection to determine if traffic signals are justified, based on York Region's Traffic Signal Warrant policy and recognizing the needs of pedestrians;
- 3) And that York Region staff be requested to report back to City Council regarding the results and recommendations;
- 4) And that Staff be authorized and directed to do all things necessary to give effect to this resolution.

**PURPOSE:**

This report recommends that York Region staff be requested to evaluate the justification for traffic control signals at the intersection of Box Grove Bypass & Riverwalk Drive to improve pedestrian safety.

**BACKGROUND:**

The intersection of Box Grove Bypass & Riverwalk Drive is located in southeast Markham, in the Box Grove community (see Attachment "A"). The intersection is under the jurisdiction of the Region of York and is not currently signalized. Right-of-way is assigned to Box Grove Bypass, which is an arterial road with a posted speed limit of 60 km/h. The roadway has a six-lane cross-section at the intersection (four "through" lanes and two turning lanes). Riverwalk Drive is a minor collector road and is stop controlled with a posted speed limit of 40 km/h. David Suzuki Public School is located 330 metres to the west of the intersection.

Operations staff and the local Ward Councillor's office have received multiple concerns from residents and administrative staff at David Suzuki Public School regarding pedestrian safety at the subject intersection. There are a number of pedestrians, including students, walking to school that cross Box Grove Bypass unassisted due to the lack of traffic control measures at the intersection to facilitate a safe pedestrian crossing.

**OPTIONS/ DISCUSSION:**

**A supervised school crossing is not recommended**

The City of Markham's adult school crossing guard program provides supervision at designated school crossings where technical warrant criteria are met. As per section 176 of the Highway Traffic Act, a supervised school crossing cannot be implemented on a roadway with a posted speed limit in excess of 60 km/h. While Box Grove Bypass does

have a 60 km/h speed limit, actual vehicle speeds may be higher. Also, the six-lane cross-section at the intersection would be challenging for a school crossing guard to safely assist with pedestrian crossings while ensuring that traffic approaching the intersection can come to a safe stop. Therefore, a supervised school crossing is not recommended.

### **Traffic signals do not meet justification warrants outlined in the Ontario Traffic Manual**

To implement traffic control signals at an intersection, the necessary justification warrants must be met as outlined by the Ontario Traffic Manual (OTM), Book 12. The justification warrants are as follows:

- 1) Minimum Vehicular Volume;
- 2) Delay to Cross Traffic;
- 3) Accident Experience.

Traffic signals are justified when one of the three criteria are met 100%. Alternatively, a traffic signal is justified if two criteria are justified 80% or more. The Region conducted a warrant analysis on September 18, 2013 at the intersection, with the results noted below:

<b>WARRANT 1 Minimum Vehicular Volume</b>	<b>WARRANT 2 Delay to Cross Traffic</b>	<b>WARRANT 3 Accident Experience</b>
<b>68%</b>	<b>54%</b>	<b>0%</b>

Results conclude that a traffic signal at Box Grove Bypass & Riverwalk Drive does not meet the minimum warrant criteria outlined in the OTM.

### **York Region Traffic Signal policy does provide alternative criteria to warrant a traffic signal**

As outlined in the Region's traffic signal policy (Attachment "B"), there are alternative warrants that may be used to justify a new traffic signal:

1. Installation of unwarranted traffic signals paid by local municipalities. Applicable only if Warrant 1 and Warrant 2 outlined the OTM are satisfied by at least 70%. All installation costs and annual operating costs of a new traffic signal would be incurred by the local municipality. When the traffic signal becomes warranted, the Region will reimburse the local municipalities 100% of the original installation cost. Because Warrants 1 and 2 are not 70% satisfied, this warrant cannot be considered.
2. Safety Warrant. Analysis of existing safety performance functions (SPFs) of an unsignalized intersection and compared to a projected safety performance, if traffic signals were installed.

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3. Peak-hour delays for vehicles entering the “major” street from the “side” street.  
Analyses of the total traffic delay on the minor street approaching the intersection, with consideration being given to the total peak-hour traffic volume at the intersection.

Given that the intersection does not meet technical warrant criteria outlined in the Ontario Traffic Manual, Operations staff recommends that York Region staff be requested to re-evaluate the subject intersection, utilizing the alternative criteria as outlined in their Traffic Signal policy, while recognizing the needs of pedestrians.

**FINANCIAL CONSIDERATIONS:**

Not applicable.


**ALIGNMENT WITH STRATEGIC PRIORITIES:**

This report aligns with the community safety component of the transportation/transit strategic priority. If a traffic signal is provided, pedestrian safety will be improved and may assist with active transportation initiatives at David Suzuki Public School.

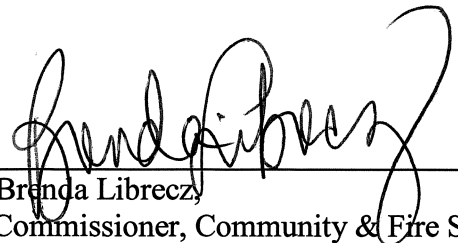
**BUSINESS UNITS CONSULTED AND AFFECTED:**

Not applicable.

**RECOMMENDED BY:**



Paul Ingham,  
Director, Operations



Brenda Librecz,  
Commissioner, Community & Fire Services

**ATTACHMENTS:**

Attachment “A” – Location Map

Attachment “B” – York Region Traffic Signal Warrant policy