



**ROADS, PARKS AND FLEET
DEPARTMENT
MEMORANDUM**

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File: TMP-24599
Pending #:

TO: MAYOR J. LEHMAN, AND MEMBERS OF COUNCIL

FROM: D. FRIARY, DIRECTOR OF ROADS, PARKS AND FLEET

**NOTED: A. MILLER, RPP
GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT
M. PROWSE, CHIEF ADMINISTRATIVE OFFICER**

RE: ALL-WAY STOP INVESTIGATION FOR THE QUEENSWAY AND EMPIRE DRIVE

DATE: SEPTEMBER 9, 2019

This Memo is in response to the request for an All-Way Stop investigation at the intersection of The Queensway and Empire Drive. Currently, the stop control requires vehicles travelling along Empire Drive (Local Street) to stop at The Queensway (Minor Collector) please refer to Appendix "A" for a map of the study area.

Staff have investigated the intersection of The Queensway and Empire Drive to determine if an All-Way Stop is warranted based on criteria within the Ontario Traffic Manual (OTM) Book 5 – Regulatory Signs.

The OTM warrant is based on volume, collision history, and stopping sight distance at the intersection. There are two (2) classes of Minimum Volume Warrants identified in the OTM; each class is based on the classifications of roadways; Minor Roadways (Local Roadways) and Major Roadways (Collector and Arterial Roadways). A road classification is determined by using the City of Barrie Official Plan, Schedule D – Road Plan.

Based on the classification of The Queensway, as a Collector Roadway, the Major Roadway Minimum Volume Warrant was used. Each component of the all-way stop Warrant has the ability to satisfy the warrant independently.

- **Volume** - The total vehicle volume on all intersection approaches exceeds 500 vehicles for the highest hour recorded.
- **Collision History** - reviews collisions over a three-year period, which are correctable through All-Way Stop control (i.e. right angle and turning type collisions) and which are reported to the Barrie Police Service.
- **Stopping Sight Distance** - the distance required for a driver to see ahead in order to stop if necessary.



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A traffic count was completed on May 9, 2019 for the purpose of completing an All-Way Stop warrant. The results of the investigation are summarized below:

Description	All-Way Warrant	Recorded Data	Satisfied All-Way Warrant	
			Yes	No
Part 1a – Total Volume Hourly Traffic Volume ⁽¹⁾	Greater than 500 vehicles per hour ⁽²⁾	233 vehicles in the peak hour		
Part 1b – Volume Split Percentage of Traffic on Empire Drive (Minor Street)	Greater than 200 vehicles and pedestrians in the peak hour and the volume split is not greater than 30% ⁽²⁾	67 vehicles/pedestrians in the peak hour (29%)		X
Part 2 – Collisions Intersection Collision History	Average 4 per year over 3 years	2 collisions over a 3 year period		X
Part 3 – Visibility Stopping Sight Distance from Empire Drive	Less than 65m	No restrictions		X

(1) *Peak Hour Volume is the maximum number of vehicles that pass through the intersection during a one hour period.*

(2) *1a & 1b must both be satisfied to warrant an All-Way stop.*

An All-Way Stop Survey was prepared and mailed to 34 property owners on The Queensway and Empire Drive. Results of the All-Way Stop Survey are as follows:

The Queensway and Empire Drive All-Way Stop Survey	Response Received	Percentage of Responses
Option A - Leave as is (traffic along Empire Drive stops at The Queensway)	3	60%
Option B – Install an All-Way Stop at The Queensway and Empire Drive.	2	30%
TOTAL (Out of 34)	5	15%

Residents, also had expressed concerns regarding vehicles speeding along The Queensway at Empire Drive and the implementation of a stop sign would discourage this. Staff considered this concern however do not support the installation of an All-Way Stop for this purpose as The Ontario Traffic Manual Book 5 – Regulatory Signs states:

All-way stop controls should not be used under the following conditions:

- Where the protection of pedestrians, school children in particular, is a prime concern. This concern can usually be addressed by other means; and
- As a speed control device.



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Staff have implemented a radar speed board to display motorist's speeds travelling southbound on The Queensway. The speed board was installed on March 5, 2019. To date, the average speed is 39km/h and the 85th percentile speed is 51km/h.

Staff have addressed residents' concerns with both implementing a radar speed board and temporary speed cushions. There are currently two speed cushions installed on The Queensway between Empire Drive and Succession Crescent, in front of Hyde Park Public School.

Unwarranted all-way stops create operation and safety concerns for both pedestrians and vehicles entering the intersection. The unwarranted all-way stop makes drivers feel the stop is unnecessary and motorists do not comply with the stop control, as there is little to infrequent side street traffic encountered. This also creates a disregard for other traffic control devices because drivers soon learn to ignore the stop control device, as they feel the signs are not required.

Staff do not support the implementation of an unwarranted all-way stop. There has been numerous engineering studies that have shown that the implementation of unwarranted all-way stop result in an increase in aggressive driving. Motorists do not feel they are required to stop since they do not encounter vehicles on the side street. Studies also indicate there is usually an increase in vehicles speeds as drivers attempt to make up for lost time at the stop location.

Staff have reviewed the intersection of The Queensway and Empire Drive for the installation of an all-way stop. Based on the results of the investigation, the installation of an all-way stop at this intersection does not satisfy the warrants identified in the OTM at this time.

In accordance with the Council approved All-Way Stop Policy a memo is provided to advice of the results of an investigation when the OTM warrants have not been satisfied.

D. Friary
Director of Roads, Parks and
Fleet

Appendix "A"

