



ROADS, PARKS AND FLEET DEPARTMENT MEMORANDUM

TO: MAYOR J. LEHMAN, AND MEMBERS OF COUNCIL

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

NOTED: A. BOURRIE, RPP
GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT
(ACTING)

M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

RE: ALL-WAY STOP INVESTIGATION FOR PENVIL TRAIL AND MCINTYRE DRIVE

DATE: APRIL 1, 2019

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

Staff have investigated the intersection of Penvil Trail and McIntyre 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 Penvil Trail, as a Local Roadway the Minor 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 350 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 December 13, 2018 for the purpose of completing an All-Way Stop warrant. The results of the investigation are summarized below:

<u>Description</u>	<u>All-Way Warrant</u>	<u>Recorded Data</u>	<u>Satisfied All-Way Warrant</u>	
			<u>Yes</u>	<u>No</u>
Part 1a – Total Volume Hourly Traffic Volume ⁽¹⁾	Greater than 350 vehicles in peak hour ⁽²⁾	106 vehicles in the peak hour		
Part 1b – Volume Split Percentage of Traffic on Penvil Trail (Minor Street)	Greater than 35% ⁽²⁾	42 (40%) vehicles in the peak hour		X
Part 2 – Collisions Intersection Collision History	Average 4 per year over 3 years	0 collisions over a 3 year period		X
Part 3 – Visibility Stopping Sight Distance from McIntyre 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 32 property owners on Penvil Trail and McIntyre Drive. Results of the All-Way Stop Survey are as follows:

Penvil Trail and McIntyre Drive All-Way Stop Survey	Response Received	Percentage of Responses
Option A - Leave as is (traffic along McIntyre Drive stops at Penvil Trail)	0	0%
Option B – Install an All-Way Stop at Penvil Trail and McIntyre Drive.	4	100%
TOTAL (Out of 32)	4	13%

Residents, also had expressed concerns regarding vehicles speeding along Penvil Trail at McIntyre 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:

“Inappropriate Use of All-way Stop Control 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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Historically, Staff have implemented radar speed boards to display motorist's speeds and to gather data on speeds at the specific location. Staff will put Penvil Trail in consideration for a radar speed board in 2019.

Staff has requested police enforcement through Barrie Police Services to monitor the speeding concerns along Penvil Trail.

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 have 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 Penvil Trail and McIntyre 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.

Appendix "A"

