

MEMORANDUM

To: Mayor Kogon and Members of Council
From: Dwayne Pike, Chief of Police
Date: April 23rd, 2019
Subject: Robert Angus Drive - Request to Review Speed Limit

BACKGROUND

On October 10th, 2017, Council directed the Traffic Authority to review the Speed Limit on Robert Angus Drive. Mayor Kogon had been approached by several individuals who felt the speed limit on Robert Angus Drive should be lowered. The current speed limit is set at 70km/h. Robert Angus Drive extends from its intersection with South Albion Street to its intersection with Willow Street. The road itself extends past the Willow Street intersection and into the county as 'John Black Road' where the speed limit changes from 70km/h to 80km/h as one continues east.

Robert Angus Drive, between the intersections of South Albion Street to the intersection at Church Street, consists of 2 eastbound lanes and 1 westbound lane. The median eastbound lane, while marked as a passing lane, is used primarily for left turns into one of several businesses that are currently located on Robert Angus Drive. The intersection of Robert Angus Drive and Church Street is controlled by a 4-way stop and a flashing red light above the intersection. The stretch of road between the intersections of Church Street and Willow Street is 2 lane only. The intersection at Willow Street is also controlled by a 4-way stop.

In the last 20 years there has been a significant change in the number of intersections with public roads or lanes due to increase in businesses located on Robert Angus Drive. With this change also came the widening and the addition of the second eastbound lane several years ago.

The local traffic authority currently has the ability to adjust speed limits on local streets as long as set speeds are not lower than 50 km/h or that exceed 80 km/h.

DISCUSSION

The concern voiced is whether the current posted speed limit of 70km/h is appropriate given the changes to Robert Angus Drive over the last 2 decades. As a part of this review, several variables were considered, which included:

1. Road classification
2. Road design
3. Road Geometry (horizontal and vertical)
4. Roadside hazards
5. Pedestrian Exposure
6. Cyclist exposure
7. Intersection with public roads/lanes (and types of controls in place)
8. Intersections with private access driveways
9. On-street parking
10. Reported accidents
11. Average Speeds/85th percentile speeds

The “Canadian Guidelines for Establishing Posted Speed Limits” (Transportation Association of Canada, 2009) was utilized in the preparation of this report. This manual not only provided guidelines for reviewing speed limits, but also provided tools for establishing speed limits based on the road characteristics.

In determining the appropriate speed limit, there has been no single accepted process used universally in Canada¹. In some cases, speed limits were based on the speed that was initially set when the road was designed. In many engineering studies, the ‘85th percentile’ speed was used to determine appropriate speed limits. This method considered that most drivers adjusted their speeds to what was likely a reasonable and safe speed to avoid crashes. As a result, the calculation used would determine the speed (or below) which 85 percent of all vehicles were observed to travel under free-flowing conditions.

The guidelines provided utilizes this information, but also takes into consideration many of the variables listed above.

Also used in this study was the *Traffic Logix Speed Display Device* that was purchased by the Amherst Police Department in 2014. This device was set up on Robert Angus Drive from October 25th 2017 until January 26th, 2018. The data gathered by the device was used to gather information on both vehicle volumes and speeds on Robert Angus Drive (travelling east and west). In reviewing the data, we learned the following:

1. The average speed of vehicles on Robert Angus Drive was 60.1km/h
2. Traffic volume per day averaged 4,120 vehicles per day
3. The 85th percentile speed was approximately 68km/h
4. Very few vehicles travelled faster than 80km/h
5. The highest percentage of speeding violations occurred later at night/early morning
6. Most speeding violations were vehicles headed in a westerly direction

A review of accidents on Robert Angus Drive did not present any alarming trends. In 2018, police received 8 accident reports on Robert Angus Drive. In 2017 there were also 8 accidents. With the amount of traffic on this stretch, this is not an alarming number, especially when one reviews the cause of the accidents which includes poor/slippery driving conditions, failing to yield to oncoming traffic and accidents involving wildlife.

Robert Angus Drive from one end to the other is just over 2km long. The guidelines suggest that a minimum length roadway of 1000m is required for speed zones with posted speed limits of 70km/h or higher². ‘Design Speed’ as noted above only refers to freeway, highway and expressway classifications and was not a consideration in setting a recommended speed limit for Robert Angus Drive.

The guide provides a chart in which the variables listed above can be used to determine a total risk score which then calculates a recommended speed limit. In the case of Robert Angus Drive, many of the risks associated to the design and exposure was determined to be low. Even with the increased number of intersections with public roads or lanes the risk remained fairly low.

¹ Canadian Guidelines for Establishing Posted Speed Limits, Transportation Association of Canada, December 2009, p 1.


² Canadian Guidelines for Establishing Posted Speed Limits, Transportation Association of Canada, December 2009, p 4

There are no concerns of roadside hazards such as rock face and water hazards, nor is there issues related to curves or hills that affect speed limits safety. There were also no issues with on-street parking or with an excessive number of interchanges.

The total risk calculated for Robert Angus Drive was 23. As a result, the recommended speed limit was 70km/h. The risk score would have to be a minimum of 34 in order for there to be a change in the recommended speed limit.

CONCLUSION

According to the criteria as set out by the "Canadian Guidelines for Establishing Posted Speed Limits" the current posted speed limit of 70km/h is the appropriate speed limit for Robert Angus Drive and changing to a lower speed limit is not recommended.

Clear Sheet		 Automated Speed Limit Guidelines FORM A - Automated Speed Limit Guidelines Spreadsheet				Version: 10-Apr-09																																																											
Name of Corridor:		Robert Angus Drive																																																															
Segment Evaluated:		Willow Street		to		South Albion Street																																																											
Geographic Region:		Amherst NS																																																															
Road Agency:		Amherst NS																																																															
Road Classification:		Collector		Length of Corridor:		2,000 m																																																											
Urban / Rural:		Urban		Design Speed: (Required for Freeway, Expressway, Highway)																																																													
Divided / Undivided:		Undivided		Current Posted Speed: (For information only)		70 km/h																																																											
Major / Minor:		Major		Prevailing Speed: (85th Percentile - for information only)		68 km/h																																																											
# Through Lanes Per Direction:		1 lane		Policy: (Maximum Posted Speed)		No policy																																																											
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