

20

RE-ASSESSMENT OF AN “ALL-WAY” STOP NASHVILLE ROAD AND HUNTINGTON ROAD CITY OF VAUGHAN

The Transportation and Works Committee recommends the adoption of the recommendation contained in the following report, May 28, 2008, from the Commissioner of Transportation Services with the following additional recommendation:

- 2. That Transportation Services staff conduct one further review of traffic volumes at the intersection of Nashville Road and Huntington Road next year, and then consider conducting reviews on a periodic versus annual basis at this location thereafter.**

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk circulate this report to the Clerk of the City of Vaughan to advise that the implementation of an all-way stop at Nashville Road and Huntington Road is not recommended at this time.

2. PURPOSE

This report responds to a request to monitor traffic volumes and re-assess the warrants for the implementation of an all-way stop at the intersection of Nashville Road and Huntington Road (*see Attachment 1*) in accordance with a Transportation and Works Committee report adopted by Council at its meeting of June 21, 2007.

3. BACKGROUND

An all-way stop was not warranted in 2007 at Nashville Road and Huntington Road and staff was requested to monitor traffic volumes and re-assess the warrant on an annual basis

At its meeting of June 13, 2007, the Transportation and Works Committee endorsed a report titled “Request for “All-way Stop - Nashville Road and Huntington Road - City of Vaughan” (*see Attachment 2*). The report recommended that an all-way stop at the intersection of Nashville Road at Huntington Road not be installed. Recommendation two of that report requested staff to monitor traffic volumes at the intersection and re-assess the warrants to implement an all-way stop on an annual basis.

Previous studies in the vicinity of Nashville Road and Huntington Road include speed studies and vehicle classification studies

Over the past several years, a number of studies have been conducted on this section of Nashville Road. Some of these studies obtained information on truck volumes and the operating speed of traffic; however, were not intended to specifically assess an “all-way” stop at the intersection of Nashville Road and Huntington Road. Speed studies conducted during 2006 and 2007 concluded that operating speeds have remained constant on Nashville Road and that truck volumes have also remained constant. Staff will continue to monitor operating speeds and truck volumes on this section of road as part of their day-to-day operations.

Improvements have been implemented on Nashville Road

As part of the Capital Road Program, Nashville Road was resurfaced in 2007. Also, and as a result of the studies mentioned above, additional warning signs have been installed and the posted speed limit has been reduced on this section of Nashville Road. Reports on these matters were prepared and presented to the Transportation and Works Committee and endorsed by Regional Council. In addition, Regional Council authorized the posting of a permanent half load restriction on this road. Future studies will determine if the half load restriction has had any impact on the volume of trucks using this road.

4. ANALYSIS AND OPTIONS

At the intersection of minor roads, whether local or Regional roads, the typical traffic control method is to provide stop signs on the minor road and allow the traffic on the major road to “free-flow” to minimize delay to traffic on the through road. Currently, there are stop signs for northbound and southbound traffic at the intersection of Nashville Road and Huntington Road.

The total amount of traffic using this intersection over an eight-hour period has increased by only 138 vehicles since 2007

In the spring of 2007, an all-way stop was requested at the intersection of Nashville Road and Huntington Road. In order to conduct an analysis of the original request, Regional staff conducted an eight-hour intersection count at the intersection on April 12, 2007 between the hours of 7:00 a.m. to 9:00 a.m., 11:00 a.m. to 2:00 p.m. and 3:00 p.m. to 6:00 p.m. In order to re-assess the warrant for the implementation of an all-way stop at this location, an eight-hour intersection count, covering the same eight-hour period, was conducted on April 17, 2008. The results of these two intersection counts are shown in Table 1 below and include the eight hours of recorded traffic volume at the intersection of Nashville Road and Huntington Road.

Table 1
Nashville Road and Huntington Road
Traffic Count Summary

Hour	Start	End	Total Vehicles April 12, 2007	Total Vehicles April 17, 2008	Difference
1	07:00	08:00	690	703	+13
2	08:00	09:00	699	688	-11
3	11:00	12:00	283	316	+33
4	12:00	13:00	323	255	-68
5	13:00	14:00	324	324	0
6	15:00	16:00	621	621	0
7	16:00	17:00	726	801	+75
8	17:00	18:00	<u>836</u>	<u>932</u>	<u>+96</u>
Total	-	-	4502	4640	138

Staff use Ministry of Transportation guidelines to determine the merits of an all-way stop

The Region uses guidelines set out by the Ministry of Transportation of Ontario to assess requests for traffic control signals and all-way stops. The implementation of an all-way stop location is governed by the Ministry of Transportation of Ontario guidelines. These guidelines provide Municipalities throughout the Province with warrants for their implementation and use, whereby, traffic is measured against thresholds to determine the merit of an all-way stop sign location. Stop signs are not intended for traffic calming or speed control devices.

The results of the most recent traffic count conducted on April 17, 2008 were applied against a set of warrant criteria contained in Book 5 of the *Ontario Traffic Manual*. In order to consider an all-way stop control on a major road, ALL of the following conditions must be met:

- The total vehicle volume on all intersection approaches must exceed 500 vehicles per hour (VPH) for each of any eight hours of the day; and
- The combined vehicular and pedestrian volume on the minor street must exceed 200 units per hour (all vehicles plus pedestrians wishing to enter the intersection) for each of the same eight hours, with an average delay to traffic on the minor street (either vehicles or pedestrians wishing to enter the intersection) of greater than 30 seconds; and

- The volume split between the major and minor road does not exceed 70/30. The volume on the major street is defined as vehicles only and the volume on the minor street includes all vehicles plus any pedestrians wishing to cross the major roadway.

All of these warrant criteria must exceed a minimum threshold value for a minimum of eight hours during a day. The results of the all-way stop warrant analysis, for the count conducted on April 17, 2008, are shown in Table 2 below.

Table 2
Nashville Road and Huntington Road

Warrant Criteria	Minimum Threshold Value	Required Hours Above the Threshold	Count Results (in hours)
Total volume at intersection	500 vph	8	5
Pedestrian/vehicle crossing major road	200 peds. or vph	8	0
% traffic on minor road	30%	8	0

Traffic volumes have not increased sufficiently to warrant an all-way stop at the intersection

Based on the two traffic counts that have been conducted, and the analysis of the traffic volumes at the cross intersection of Nashville Road and Huntington Road, an all-way stop at this location is not warranted.

Installing traffic control devices, which do not meet the warrant criteria, may result in a reduction in overall intersection safety. Specifically, the installation of traffic control devices at intersections often increases the occurrence of certain types of collisions. For example, the potential for rear end collisions may increase and motorists may not comply with control devices which are not warranted. Noise volumes from vehicles, particularly heavy trucks, slowing to a stop and accelerating from a stop, can be excessive and can lead to complaints from area residents.

5. FINANCIAL IMPLICATIONS

There are no financial implications associated with this report. The cost to conduct the turning movement count and the analysis are part of the day-to-day operations of staff and are included in the 2008 Road Budget.

6. LOCAL MUNICIPAL IMPACT

This report summarizes the results of monitoring traffic volumes and re-assesses the warrants for the implementation of an all-way stop at the intersection of Nashville Road and Huntington Road in the City of Vaughan. This report will be forwarded to the City of Vaughan for their information.

7. CONCLUSION

This report responds to a Council recommendation to monitor traffic volumes and re-assess the warrants for the implementation of an all-way stop at the intersection of Nashville Road and Huntington Road. Based on a turning movement count conducted on April 17, 2008, an all-way stop is not warranted at this intersection.

For more information on this report, contact Paul Jankowski, General Manager, Roads, at extension 5901 in the Transportation Services Department.

The Senior Management Group has reviewed this report.

(The attachments referred to in this clause are attached to this report).