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NASHVILLE ROAD
CITY OF VAUGHAN

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, March 22, 2007, from the Commissioner of Transportation and Works with the additional following recommendation:

- 5. The Commissioner of Transportation and Works be requested to report to the June 13th, 2007 Transportation and Works Committee on recent warrant counts and further options for speed control on Nashville Road and Huntington Road.**

1. RECOMMENDATIONS

It is recommended that:

1. Truck Route guidance signs be installed at key intersection locations on the Regional road network to promote trucks to use Rutherford Road between Highway 27 (Y.R. 27) and Highway 50, in the City of Vaughan.
2. The existing speed limit of 80-km per hour on Nashville Road (Y.R. 49) from the east limit of Highway 50 to 1200 metres east of the east limit of Highway 50, be reduced to 70-km per hour, in the City of Vaughan.
3. The Regional Clerk forward this report to the Clerk of the City of Vaughan.
4. The Regional Solicitor prepare the necessary by-law.

2. PURPOSE

This report responds to a communication from the Nashville Road Ratepayers Group and further direction from the Transportation and Works Committee requesting consideration of a means to direct truck traffic away from Nashville Road, through the hamlet of Nashville, and to consider other methods to reduce the operating speed of traffic on Nashville Road.

3. BACKGROUND

At the Transportation and Works Committee of February 7, 2007 a communication from Paul Godin was received. The communication requested that Nashville Road be transferred from the Region to the City of Vaughan and that truck traffic could then be limited to “local use only”. In addition, a report was on the agenda that was adopted, with amendments, directing staff to investigate traffic control measures including reducing speed limits; the installation of all-way stops; and the posting of truck route to redirect traffic to Rutherford Road.

Nashville Road is a two-lane roadway in southwest Vaughan providing an east-west connecting road between Highway 27 and Highway 50 which carries approximately 10,600 vehicles per day (*see Attachment 1*). Through this area, truck traffic, in addition to the operating speed of traffic, continues to be an issue for area residents. It has been suggested that truck route signage be installed to divert truck traffic to more appropriate roads and that other traffic calming measures be investigated to potentially lower operating speeds on Nashville Road and through the hamlet of Nashville.

During the past few months, two reports have been endorsed by Regional Council on other similar issues regarding Nashville Road. In September 2006, through a resolution from Regional Council, the posted speed limit on Nashville Road between the east limit of the east leg of Klein’s Crescent and the west limit of Highway 27 was lowered from 60-km per hour to 50-km per hour. This speed limit was reduced to create a more consistent travel speed and increase traffic safety in the area.

Also in September 2006, through a motion from Regional Council, staff was authorized to investigate the feasibility of transferring the jurisdictional ownership of Nashville Road, between Highway 27 and Highway 50, to the City of Vaughan.

On October 19, 2006, Regional Council directed staff to discuss the issue of transferring the ownership of Nashville Road with City of Vaughan staff and to report the findings to Regional Council in early 2007.

Regional staff, in consultation with City of Vaughan staff, investigated the feasibility of transferring jurisdictional ownership of Nashville Road, between Highway 27 and Highway 50, to the City of Vaughan. The results of the discussion and application of the Region’s assumption criteria revealed that Nashville Road between Highway 27 and Highway 50 meets the characteristics of a Regional arterial road and should remain as part of the Regional road system. This information was provided, in a Transportation and Works report, to Regional Council in February 2007.

Several studies have been completed on this section of road including speed studies, truck studies and video observation. As a result of these studies, additional warning signs have been installed and the posted speed limit has been reduced. Reports on these matters

were prepared and presented to the Transportation and Works Committee and endorsed by Regional Council.

The intention of a Regional road, whether classified as rural or urban, is to provide a high level of service minimizing flow interruption while maintaining a constant speed. These roads serve as key routes in a network connecting major economic centres, providing service for all types of vehicles including heavy trucks. Nashville Road performs the function of a Regional arterial road which includes accommodating all types of traffic, including trucks. As a Regional arterial road, it is not recommended that trucks be restricted.

4. ANALYSIS AND OPTIONS

In an effort to further reduce the truck traffic impact on Nashville Road to residents; Regional staff completed the following reviews:

4.1 All Way Stop Control

An all way stop control has been requested on Nashville Road at one of the several local roads that intersect it. Most of these local roads are relatively low volume roads and create “tee” intersections with the exception of one cross intersection. An analysis of the traffic volumes at the cross intersection of Nashville Road and Huntington Road reveals that an all way stop at this location is not warranted. The traffic volumes at any of the “tee” intersections along Nashville Road would also not warrant an all way stop control.

Nashville Road operates as a through road with the intent to minimize the interruption of traffic and maintain a constant speed. To implement an all way stop at a location where it is not warranted would create non-compliance to the stop condition, may increase driver frustration and traffic congestion and reduce overall safety. A stop control is not an effective method to reduce operating speeds or deter through traffic.

4.2 Traffic Calming Measures

A common method to reduce traffic operating speeds on certain roadways is to install traffic calming devices. These devices are typically in the form of speed humps, chicanes, median islands, etc. and are commonly found on local streets under the jurisdiction of local municipalities where operating speeds and traffic volumes are considerably lower.

In the past, Regional staff has not supported any proposal for speed humps or chicanes on Regional roads. They can increase driver frustration and lengthen response times for emergency vehicles. Noise levels from vehicles travelling over speed humps can actually increase. Local municipalities that originally installed these devices to calm traffic, have now removed these devices from some roadways at the request of area residents.

A method of traffic calming that can be used in certain situations on Regional roads is narrowing the traffic lanes either by reducing the physical pavement width or by line painting.

4.3 Truck Prohibition

The Regional road network is designed as an arterial road network capable of accommodating all vehicular traffic, including trucks. This allows truck traffic to be distributed more equally across the Regional road network.

The Region does not currently have restrictive regulations to truck traffic anywhere on the Regional road system except for half load restrictions. These load restrictions are implemented as required by the presence of road structures such as bridges or culverts and the ability of the pavement structures to support full loads during the spring thaw.

Major Mackenzie Drive, west of Highway 27 is a narrow winding road with a substandard road base which is structurally inadequate to carry such heavy truck traffic. If a truck restriction was implemented on Nashville Road, between Highway 27 and Highway 50, truck traffic would have to use King Road or Rutherford Road.

In previous situations where trucks were encouraged to avoid communities or certain road sections, truck route guidance signs have been used. These signs are advisory in nature and do not require a Regional by-law. Currently, truck route guidance signs exist in the Newmarket area for trucks travelling through the community to access Yonge Street to and from the north. These signs result in a positive guidance plan with sufficient compliance from trucking companies that further restrictive regulations are not required.

4.4 Alternate Truck Route Signing

A study was conducted on August 10, 2006 to obtain the origin and destination of heavy trucks. Observations were conducted at the intersections of Major Mackenzie Drive and Highway 27; Nashville Road and Highway 27; and Nashville Road and Highway 50, during the typical evening peak traffic hours of 4:00 p.m. to 6:00 p.m.

During these studies, it was determined that the majority of truck traffic (*see Attachment 3*) on Nashville Road originates from Major Mackenzie Drive east of Highway 27 and from Highway 27 south of Major Mackenzie Drive. Forty-seven trucks travelled westbound on Major Mackenzie Drive east of Highway 27, then north on Highway 27 to continue westbound on Nashville Road. At the intersection of Nashville Road and Highway 27, 50 trucks made a northbound left turn and 10 trucks completed a southbound right turn totalling 60 heavy trucks travelling westbound on Nashville Road.

At the intersection of Nashville Road and Highway 50, during the same time period, 20 trucks made a southbound left turn and 7 trucks completed a northbound right turn totalling 27 heavy trucks travelling eastbound on Nashville Road.

Based on the current total traffic volumes, heavy trucks account for approximately 5.1% of the 10,600 vehicles (AADT) on Nashville Road. Heavy truck traffic throughout the entire Regional road network averages at approximately 7%.

King Road is a Regional road situated approximately six kilometres north of Nashville Road that provides an east-west route between Highway 27 and Highway 50. Rutherford Road is also a Regional road which is situated approximately four kilometres south of Nashville Road and provides another route for eastbound and westbound traffic between Highway 27 and Highway 50. Either of these two routes may be effective for some trucks; however, are not always viable options due to the long travel distance and additional time required to connect to other east west routes to avoid Nashville Road. Deterrents such as rising fuel costs and additional wear on heavy trucks to travel unnecessarily may comprise some of the truck traffic on Nashville Road.

Rutherford Road is situated south of Nashville Road and provides an ideal east-west route, between Highway 27 and Highway 50, for truck traffic. This road has recently been reconstructed, which may have deterred some truck traffic from using it, but recent Regional traffic data estimates heavy trucks contribute approximately 11% of all traffic on this road section. Although Rutherford Road will accommodate substantial truck traffic, it is still not a viable route for a truck originating from the area of Highway 27 and Major Mackenzie Drive that is destined toward Highway 50 and continuing in a north-west direction into Peel Region.

Typically, trucks will not travel an indirect route to get to their ultimate destination. There are various reasons that truck traffic can be found on any Regional Road. Some trucks are avoiding other routes due to topography, traffic volumes and congestion while others may be construction traffic related to an ongoing development in the vicinity.

It is difficult to determine if an alternate truck route will be successful and truck volumes will be decreased on Nashville Road as there are no enforceable components to an alternate truck route. Although a truck ban is not recommended, staff propose to place Truck Route guidance signs (*see Attachment 1*) at key intersection locations on the Regional road network to promote trucks to use Rutherford Road instead of Nashville Road. Compliance to the alternate route may be relatively high at the onset of the posting of applicable signage; but, based on past experience, compliance rates will gradually decline as motorists no longer observe the guidance signs.

4.5 Posted Speed Limit

The concerns of area residents include the operating speed of traffic on Nashville Road. The posted speed limit on Nashville Road, from Highway 50 to approximately 1,200 metres east, is currently posted at 80-km per hour. The posted speed limit then becomes 50-km per hour from that point, through the intersection of Huntington Road, and then continues through to Highway 27.

A speed study conducted on Nashville Road west of Huntington Road found that the 85th percentile speed of traffic is 75-km per hour. Although the majority of traffic is in compliance with the posted speed limit, it is recommended to reduce the existing posted speed limit of 80-km per hour on Nashville Road (Y.R. 49) from the east limit of Highway 50 to 1200 metres east of the east limit of Highway 50, to 70-km per hour. It is anticipated that the decrease in the posted speed limit will create more consistent travel speeds in this area and increase safety (*see Attachment 2*).

5. FINANCIAL IMPLICATIONS

The cost associated with the manufacture and installation of the necessary truck route guidance signs and the speed limit signs is included in the 2007 Roads Budget.

6. LOCAL MUNICIPAL IMPACT

Regional staff will confer with City of Vaughan staff regarding the location of truck route guidance signs to reduce truck traffic on Nashville Road between Highway 27 and Highway 50.

7. CONCLUSION

Region staff has completed a review to help deter heavy trucks from using Nashville Road. In order for this to occur, it is recommended that Regional Council authorize the installation of Truck Route guidance signs at key intersection locations on the Regional road network to promote trucks to use Rutherford Road between Highway 27 and Highway 50, in the City of Vaughan. Regional staff will confer with City of Vaughan staff regarding the location of these truck route guidance signs to ensure they are located appropriately and will assist in reducing truck traffic on Nashville Road between Highway 27 and Highway 50.

The existing posted speed limit on Nashville Road (Y.R. 49), from the east limit of Highway 50 to 1200 metres east of the east limit of Highway 50, should be reduced from 80-km per hour to 70-km per hour in order to help reduce vehicular speeds through the hamlet of Nashville.

Additionally, staff will review the possibility of painting narrower traffic lanes on Nashville Road by changing pavement markings to reduce operating speeds.

For more information on this report, contact Brian Harrison, Director, Operations, Roads Branch at extension 5205 in the Transportation and Works Department.

The Senior Management Group has reviewed this report.

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