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TRAFFIC CONTROL SIGNAL REQUEST THE QUEENSWAY SOUTH AND RIVEREDGE DRIVE/CAMERON CRESCENT TOWN OF GEORGINA

The Transportation and Works Committee recommends the adoption of the recommendation contained in the following report dated June 3, 2009, from the Commissioner of Transportation Services.

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk circulate this report to the Clerk of the Town of Georgina to advise that the installation of a traffic control signal at The Queensway South and Riveredge Drive/Cameron Crescent is not recommended at this time but Regional staff will work in conjunction with staff of the Town of Georgina, during the review of the development of Crates Landing, to facilitate the installation of a future traffic control signal.

2. PURPOSE

This report responds to a Town of Georgina Council resolution requesting the Region install a traffic control signal at the intersection of The Queensway South and Riveredge Drive/Cameron Crescent. A location map is attached (*see Attachment 1*).

3. BACKGROUND

The Queensway South is a four lane roadway with a posted speed limit of 50 kilometres per hour. The intersection of The Queensway South and Riveredge Drive/Cameron Crescent is located approximately 1,900 metres north of Glenwoods Avenue and approximately 570 metres south of Morton Avenue. The Queensway South crosses over the Maskinonge river approximately 90 metres south of Riveredge Drive. The Queensway South, Glenwoods Avenue, and Morton Avenue are all Regional roads.

Riveredge Drive and Cameron Crescent are both two-lane local roads under the jurisdiction of the Town of Georgina. Currently, the intersection of The Queensway South and Riveredge Drive/Cameron Crescent is a cross intersection controlled with a stop sign on each local street. Cameron Crescent continues west and north, then east, eventually intersecting again with The Queensway South.

The lands directly fronting The Queensway South, in the vicinity of the intersection, consist of either commercial or vacant properties. The lands fronting the southern portion of Cameron Crescent are also vacant; however, the lands on the northern portion of Cameron Crescent are residential.

The vacant lands fronting the southern portion of Cameron Crescent are to be developed into a combined use of residential dwellings, commercial and restaurant amenities, and hotel and conference facilities. As a condition of the development of these lands, and in order to minimize the effect of traffic on the residential properties located on the northern portion of Cameron Crescent, the road will be physically split, thereby creating two independent roads.

The southern portion of Cameron Crescent, from The Queensway South to this development, will be reconstructed to a fully urbanized cross-section providing access to and terminating at this development. It has been proposed to rename this roadway to Crates Landing Way. The northern portion of Cameron Crescent will remain as is and will continue to provide access to The Queensway South for the existing residential properties. It has been proposed to rename this local roadway to Cameron Court.

An application to develop the vacant lands fronting the southern portion of Cameron Crescent is being reviewed by staff of the Town of Georgina and the Region. The development is known as Crates Landing. As part of the application, on behalf of the proponent of this development, a transportation consultant has prepared a traffic impact study for the development that recommends a traffic control signal be installed at the intersection of The Queensway South and Crates Landing Way/Riveredge Drive. As part of the Region's development review process, this traffic impact study was reviewed by staff and compared to our internal signal warrant process.

In consideration of the development application for Crates Landing, the Town of Georgina Council, at a special meeting on October 30, 2008, requested the Region approve the installation of a traffic control signal at the intersection of The Queensway South and the south leg of Crates Landing Way/Riveredge Drive.

4. ANALYSIS AND OPTIONS

All requests for traffic control signals are assessed based on a warrant process established by the Ministry of Transportation and Regional Council

The Regional Municipality of York's policy for the installation of traffic control signals is based on a series of guidelines established by the Ministry of Transportation (MTO) and guidelines approved by Regional Council. For a traffic control signal to be warranted, any one of the three warrant criteria must be satisfied by 100% or at least two warrant criteria by 80%. The first warrant criterion accounts for the total amount of traffic using an

intersection, the second warrant criterion accounts for the delay to side road traffic, and the third warrant criterion accounts for the safety performance of an intersection. Independent transportation consultants do not normally include an analysis of collision history or safety performance of an intersection.

The following warrants were used to determine whether or not traffic control signals are justified at this location:

- Traffic control signal warrants as outlined in Book 12 of the *Ontario Traffic Manual*.
- Safety warrant.
- “T” type intersections warrant.
- Peak hour delay for entering onto the major street from the side street.
- Installation of unwarranted traffic signals paid by local municipalities.

The Region’s Traffic Control Signal Warrant Policy also stipulates that a local municipality can pay for the installation of unwarranted traffic control signals provided that Warrant 1 and Warrant 2 are satisfied by at least 70%, and that all installation and ongoing maintenance costs be incurred by the local municipality until the traffic control signals become warranted.

In considering the request for signals at the intersection of The Queensway South and Riveredge Drive/Crates Landing Way, staff carried out the required studies and analysis to determine the need and warrant for the installation of these traffic control signals. Staff also reviewed the traffic impact study submitted by the transportation consultant in support of the request for traffic control signals.

Traffic control signals are not warranted at The Queensway South and Riveredge Drive/Crates Landing Way based on a turning movement count conducted in March of 2008

As part of the Region’s traffic count program, on March 25, 2008, a turning movement count was conducted at the intersection of The Queensway South and Riveredge Drive/Cameron Crescent. Staff reviewed this turning movement count and applied the typical warrant analysis to determine if the warrant for traffic control signals were met.

Table 1 presents the results of a signal warrant analysis conducted using the data from the turning movement count conducted on March 25, 2008.

Table 1
Traffic Control Signal Warrant Analysis

Warrant Component	Warrant Compliance
Minimum vehicular delay	22%
Delay to cross traffic	28%
Preventable collisions over 3 years	0

A traffic impact study provides solutions and recommendations based on the analysis of existing, proposed, and future traffic patterns and volumes

Traffic impact studies are conducted for proposed developments to ensure the additional traffic generated by the development can be accommodated on the surrounding roadways. These studies consist of three basic components that identify existing traffic on the surrounding roads, additional traffic generated by the development itself, and the predicted total future traffic that will exist on the roadways once the development is fully occupied. The future traffic also accounts for growth on the road network. Traffic impact studies conducted by transportation consultants do not normally include an analysis of collision history or safety performance of an intersection as the collision information to conduct this analysis is not readily available to transportation consultants due to privacy issues.

Traffic impact studies also recommend improvements and potential solutions to ensure all traffic in the area can be sufficiently accommodated on the road network. These improvements can include additional traffic lanes at intersections such as right and left turn lanes, access points, and even the installation of traffic control signals if there are sufficient traffic volumes to warrant them.

Based on a traffic impact study submitted as part of the development of Crates Landing, traffic control signals are warranted at The Queensway South and Riveredge Drive/Crates Landing Way

The transportation consultant's traffic impact study recommends left turn lanes on The Queensway South, on Crates Landing Way and traffic control signals for this intersection. For comparison purposes, staff reviewed this traffic impact study and the warrant analysis to determine if the warrant for traffic control signals were met.

Table 2 presents the results of the analysis conducted by the consultant. As noted above, this analysis includes existing traffic, development traffic, and future predicted traffic; however, it does not include an assessment of collision history or safety performance of the intersection as this is not a typical component of an independent traffic impact study.

Table 2
Traffic Control Signal Warrant Analysis

Warrant Component	Warrant Compliance
Minimum vehicular delay	100%
Delay to cross traffic	100%
Preventable collisions over 3 years	N/A

As mentioned previously, traffic control signals are warranted when two of the warrant components are at or above 80%. In this analysis, the warrant criteria are satisfied at the

intersection of The Queensway South and Riveredge Drive/Crates Landing Way based on the combination of existing, development, and future traffic volumes projected by the transportation consultant.

With the addition of auxiliary lanes to accommodate left turning traffic, this intersection provides a good location for a future traffic control signal

From a signal spacing and geometric perspective, the intersection of The Queensway South and Crates Landing Way/Riveredge Drive provides a good location for a traffic control signal. The intersection is directly aligned and is located a sufficient distance from other existing signalized intersections.

The area is experiencing some growth, particularly with the upcoming Crates Landing development. In the future, traffic volumes will increase to a point where the warrants for a traffic control signal will be met and eventually satisfy the Region's policy. Staff will periodically monitor traffic volumes to assess the need for traffic control signals.

The Town of Georgina could fund the installation of traffic control signals at this intersection

Typically, if traffic control signal warrants were met at the intersection of The Queensway South and Crates Landing Way/Riveredge Drive, the Region would install traffic control signals at the Region's cost.

Alternatively, in accordance with the policy adopted by Regional Council in October of 2002, if the traffic volumes at the intersection satisfied 70% of the warrant thresholds, the installation cost of traffic control signals would be the responsibility of the local municipality. Maintenance costs of the traffic control signal would also be the responsibility of the local municipality until the warrant thresholds are met at which time 100% of the original installation cost would be reimbursed by the Region. As indicated, traffic control signals are not currently warranted at this intersection.

As part of the review of the development of Crates Landing, Regional staff will work with staff of the Town of Georgina to ensure future traffic control signals can be installed at this location once they are warranted

As part of the review of the development application for Crates Landing, Regional staff, in conjunction with Town of Georgina staff, will request the installation of auxiliary lanes and the required roadwork to accommodate the traffic generated by the development. This is typical of the Regions development review process.

This roadwork will include northbound and southbound left turn lanes on The Queensway South; a left turn lane on Crates Landing Way; and potentially a left turn lane on Riveredge Drive. Also, the underground conduit system will be installed to facilitate

the installation of traffic control signals once they are warranted, in accordance with Regional policy; therefore, traffic control signals are not recommended at this time.

5. FINANCIAL IMPLICATIONS

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

In accordance with current Regional policy, if the traffic volumes at this intersection satisfied 70% of the warrant thresholds, the installation and maintenance costs of traffic control signals would be the responsibility of the local municipality. In accordance with past practice, through the Region, the local municipality would be billed for the operational cost of the traffic control signal. Once the warrant thresholds are met, 100% of the original installation cost would be reimbursed by the Region.

As indicated in this report, traffic control signals do not meet any of the warrants, even at the 70% threshold, at the intersection of The Queensway South and Riveredge Drive/Crates Landing Way.

6. LOCAL MUNICIPAL IMPACT

The Town of Georgina's Council requested the installation of traffic control signals at the intersection of The Queensway South and Riveredge Drive/Crates Landing Way. This report summarizes the results of reviewing traffic volumes and assesses the warrants for the implementation of traffic control signals at the intersection of The Queensway South and Riveredge Drive/Crates Landing Way in the Town of Georgina. This intersection does not warrant traffic control signals at this time. This report will be forwarded to the Town of Georgina for their information.

7. CONCLUSION

This report is in response to the Town of Georgina's Council resolution requesting York Region to install traffic control signals at the intersection of The Queensway South and Riveredge Drive/Crates Landing Way. In accordance with Regional policy, this intersection does not satisfy the minimum traffic control signal warrants. Therefore, Regional staff does not recommend the installation of traffic control signals at this time. Regional staff will work in conjunction with staff of the Town of Georgina to ensure the necessary roadwork is completed at the intersection to facilitate the installation of a future traffic control signal.

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 attachment referred to in this clause was included in the agenda for the June 17, 2009 meeting.)



LOCATION PLAN

Request for Traffic Control Signals
The Queensway South at Riveredge Drive
Town of Georgina

● Requested Traffic Control Signal



TRANSPORTATION AND WORKS

