

Memorandum

To: Committee of the Whole
From: Stephen Collins, Acting Commissioner, Transportation Services
Date: September 22, 2016
Re: **Temporary Left Turn Restrictions Yonge Street at Wellington Street Town of Aurora – Update**

This memorandum provides an update to the September 8, 2016, staff report regarding Temporary Left Turn Restrictions Yonge Street at Wellington Street in the Town of Aurora. The report seeks Council approval to implement temporary northbound and southbound left turn restrictions (buses excepted) on Yonge Street at Wellington Street, in the Town of Aurora, as part of a pilot project originally contemplated between October 1, 2016, and December 31, 2016.

New timelines are proposed as data collection through the winter months presents challenges with Bluetooth sensors, tube counters on pavement and observations due to inclement weather conditions. Therefore, staff recommends implementing the pilot in the spring of 2017.

Accordingly, it is recommended Council approve implementation of a temporary northbound and southbound left turn restriction (buses excepted) at the intersection of Yonge Street (Y.R. 1) and Wellington Street (Y.R. 15), from 7:00 a.m. to 9:00 a.m., and from 4:00 p.m. to 6:00 p.m., Monday to Friday, as a pilot project, commencing April 1, 2017, and ending June 30, 2017. In addition, the Commissioner of Transportation Services be authorized to terminate the restrictions prior to June 30, 2017, if deemed advisable to alleviate traffic congestion, address safety concerns or unacceptable impacts to the adjacent road network.

York Region staff will continue to work with Aurora staff to coordinate data collection, monitoring and communications to the public and stakeholders. The results of the pilot project will be communicated to Council in late 2017.



Stephen Collins, P.Eng.

Clause 5 in Report No. 12 of Committee of the Whole was deferred by the Council of The Regional Municipality of York at its meeting held on September 22, 2016.

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Temporary Left Turn Restrictions – Yonge Street at Wellington Street, Town of Aurora

Committee of the Whole recommends **deferral** of the report dated August 25, 2016 from the Acting Commissioner of Transportation Services to the **October 6, 2016 meeting of Committee of the Whole** including the following recommendations:

1. Council approve implementation of temporary northbound and southbound left turn restrictions (buses excepted) at the intersection of Yonge Street (Y.R. 1) and Wellington Street (Y.R. 15), from 7:00 a.m. to 9:00 a.m., and from 4:00 p.m. to 6:00 p.m., Monday to Friday, as a pilot project, commencing October 1, 2016, and ending December 31, 2016.
2. The Commissioner of Transportation Services be authorized to terminate the restrictions prior to December 31, 2016, if deemed advisable to alleviate traffic congestion, address safety concerns or unacceptable impacts to the adjacent road network.
3. The Regional Solicitor prepare the necessary bylaw.
4. The Regional Clerk circulate this report and the bylaw to the Clerk of the Town of Aurora and the Chief of York Regional Police.
5. Staff report back to Council with the results of the pilot project in 2017.

Report dated August 25, 2016 from the Acting Commissioner of Transportation Services now follows:

1. Recommendations

It is recommended that:

1. Council approve implementation of temporary northbound and southbound left turn restrictions (buses excepted) at the intersection of Yonge Street (Y.R. 1) and Wellington Street (Y.R. 15), from 7:00 a.m. to 9:00 a.m., and from 4:00 p.m. to 6:00 p.m., Monday to Friday, as a pilot project, commencing October 1, 2016, and ending December 31, 2016.
2. The Commissioner of Transportation Services be authorized to terminate the restrictions prior to December 31, 2016, if deemed advisable to alleviate traffic congestion, address safety concerns or unacceptable impacts to the adjacent road network.
3. The Regional Solicitor prepare the necessary bylaw.
4. The Regional Clerk circulate this report and the bylaw to the Clerk of the Town of Aurora and the Chief of York Regional Police.
5. Staff report back to Council with the results of the pilot project in 2017.

2. Purpose

This report seeks Council approval to implement temporary northbound and southbound left turn restrictions (buses excepted) on Yonge Street at Wellington Street, in the Town of Aurora, as part of a pilot project between October 1, 2016, and December 31, 2016.

3. Background

The Yonge Street and Wellington Street intersection is an important gateway to the Aurora downtown and commercial area

Physical constraints and limited options to improve turning movements at the Yonge Street and Wellington Street intersection have resulted in increased traffic congestion concerns from Aurora residents and businesses. The absence of left turn lanes at this key gateway intersection creates a situation where the flow of northbound and southbound traffic are impeded by waiting left turning vehicles, particularly during peak traffic periods.

In 2015, there were a total of 27 collisions at this intersection; a rate of 2.24 collisions per million vehicles. Based on the Region's latest network screening report, the Yonge Street and Wellington Street intersection ranked 20th out of more than 1600 intersections for potential safety improvements.

This intersection leads to residential and commercial areas to the east and west, and is a route for accessing the Aurora GO Rail station on Wellington Street. Given the GO Rail line east of Yonge Street is a physical barrier to the road network, there are very few major east-west road connections to relieve the left turn demands at the Yonge and Wellington intersection. Travel demands have increased over the years and intersection operation has decreased in level of service.

Town of Aurora Council is requesting temporary left turn restrictions at Yonge Street and Wellington Street

In January 2015, Town of Aurora Council adopted a motion to request York Region to implement a pilot project for turn restrictions at the Yonge Street and Wellington Street intersection. The proposed turn restrictions are for the northbound and southbound left turn movements on Yonge Street at Wellington Street during weekday morning and evening peak traffic periods to address traffic congestion at the intersection.

In response, Regional staff delivered a presentation to Aurora Council in June 2016 supporting Town of Aurora's request for a pilot project. The presentation highlighted the background and area context for the turn restrictions as well as monitoring, communications, and coordination required for implementation of the turn restrictions.

A similar pilot for left turn restrictions on Yonge Street at Wellington Street was undertaken in 1998

The intersection of Yonge Street and Wellington Street has been subject to ongoing traffic operation concerns over the past two decades. In 1998, at the request of Aurora Council, "No Left Turn" restrictions were implemented on Yonge Street at the Wellington Street intersection, for a three-month trial period.

In April 1998, Regional staff recommended that the turn restrictions be retained based on overall intersection operations improvements. However, the Town of Aurora did not support the recommendation and the intersection reverted back to a full movement intersection.

Yonge Street, from south of St. John's Sideroad to Industrial Parkway South, is owned and operated by the Town of Aurora

Yonge Street is a four-lane, north-south, urban arterial road with two general purpose lanes in each direction under the jurisdiction of the Town of Aurora, within the limits approximately north of Industrial Parkway (South) and south of St. John's Sideroad, and has a posted speed limit of 50 km/h. On-street parking is permitted on Yonge Street north and south of Wellington Street except between the hours of 6:30 a.m. to 8:30 a.m. from Monday to Friday on the west side, and 4:30 p.m. to 6:30 p.m. on the east side.

Wellington Street is a four-lane, east-west, urban arterial road with two general purpose lanes in each direction and a posted speed of 50 km/h. Adjacent land uses include a mix of residential and commercial developments. On-street parking is permitted on Wellington Street east of Yonge Street, except on Monday to Friday, between the hours of 7:00 a.m. to 9:00 a.m., and 4:00 p.m. to 6:00 p.m. On-street parking is prohibited west of Yonge Street.

Turn restrictions can be regulated by day and time, and buses can be excepted from a restriction

In accordance with the Highway Traffic Act, a Regional bylaw is required before any traffic restriction can be signed and enforced on a Regional road. A turn restriction may be temporary or permanent, 24 hours a day, seven days a week, or for specific day and time periods.

Buses can be exempted from a turn restriction, provided a "Buses Excepted" tab sign is installed directly below the turn restriction sign. York Region Transit, GO Transit and school buses are currently providing transit service through the intersection of Yonge Street and Wellington Street during the morning and evening peak periods. A standard Buses Excepted tab sign and "No Left Turn" sign with days and times is shown in Figure 1.

Figure 1
Buses Excepted Tab and No Left Turn Sign with Day and Times



4. Analysis and Options

In line with the Transportation Master Plan Update, the Region's goal is to maximize the efficiency and capacity of the Regional road network

Turn restrictions can be considered when shared left/through lanes create delays and weaving concerns as vehicles and buses navigate increasingly busy intersections. Eliminating left turns during weekday peak periods would improve operations at the intersection of Yonge Street at Wellington Street from a Regional traffic perspective.

Implementing turn restrictions could increase infiltration of traffic to the adjacent community. Turn restrictions can also result in erratic and unsafe driving habits as drivers make U-turns or other maneuvers to avoid the restriction. There may also be increases in southbound left turn queues at the intersection of Yonge Street at St. John's Sideroad.

Modelling supports the pilot project as a possible measure to improve the efficiency and person-moving capacity along Yonge Street

The purpose of the left turn restrictions is to improve traffic operations, and the person-moving capacity of the Yonge Street corridor. Yonge Street is the central north-south spine of the Region and also the backbone of the YRT/Viva bus network. Site observations confirm that southbound and northbound traffic waiting for a gap to make a left turn onto Wellington Street is causing through traffic to queue up, reducing intersection capacity.

Staff also conducted a modelling exercise comparing the current intersection operation with a scenario after implementing southbound and northbound left turn restrictions. Analysis indicates turn r

estrictions will, theoretically, reduce the Yonge Street approach critical queue length, delay and volume to capacity ratio between 25 to 33 per cent, as shown in Table 1.

Table 1
Traffic Operations Comparison

	Existing condition	After restrictions	Improvement
Queue length (metres)	100	75	25%
Volume/capacity ratio	0.70	0.50	29%
Delay (seconds/vehicle)	30	20	33%

Data will be collected to assess the success of the pilot project and to inform decisions for long-term solutions

An important component of the turn restriction pilot project is the data collection and monitoring program. The data collection program will include traffic volume counts at key intersections and the use of real-time wireless technology.

Real-time data collection, consisting of Bluetooth sensors, will be installed at approximately 16 sites bounded by Bathurst Street in the west, Bayview Avenue in the east, St. John's Sideroad in the north, and Industrial Parkway in the south. These sensors collect Media Access Control (MAC) addresses broadcasted by Bluetooth devices (e.g. cell phones) that are onboard vehicles. The use of MAC addresses as identifiers is the key to anonymity for privacy protection as the MAC addresses cannot identify the specific user.

The sensors will collect data before, during and after the temporary turn restriction pilot, providing the following performance measures:

- Travel time, for both travel directions along the route
- Average travel speed, for both travel directions along the route
- Origin-Destination statistics

The results of the data and monitoring program for the pilot project will also inform decisions on future initiatives and studies in the area. Staff will report back in 2017 with results of the pilot project.

Coordination with the Town of Aurora and York Regional Police is required to implement, monitor and enforce the turn restrictions

Pending Council's approval to proceed with the pilot project, staff will develop and deliver a communications plan in coordination with Town of Aurora staff that will include distributing notices and conducting a public information session prior to carrying out the pilot. In addition, the communications plan will include variable message signs, social media (Facebook, Twitter) and online surveys during the pilot project to obtain residents' and drivers' feedback. York Regional Police will be advised of the pilot project and will be asked to monitor the intersection for compliance and enforcement.

The pilot project is proposed for a duration of up to two months between October and December 2016 in order to obtain adequate data with establish stable travel patterns. A turn restriction bylaw is being recommended for commencement from October 1, 2016 to December 31, 2016, to allow staff more flexibility in timing for sign installation, agency coordination and enforcement of the pilot project. It is also recommended that the Commissioner of Transportation Services be authorized to terminate the pilot prior to December 31, 2016, if circumstances arise or traffic impacts of the turn restrictions are undesirable.

Link to key Council-approved plans

This report links to the following Council-approved plans and policies:

Regional Official Plan

- Ensure the efficient movement of goods and services in Regional centres and corridors through effective planning, urban design and infrastructure planning and deliver context sensitive infrastructure

Vision 2051

- Include Livable Cities, Complete Communities and Interconnected Systems for Mobility through a network of complete streets
- An environment that fosters healthy living; is safe, accessible, inclusive and supportive

2015 to 2019 Strategic Plan

- Improve existing transportation network, enhance transit operations and improve employment potential lands

5. Financial Implications

The temporary left turn restrictions would require new signage. There are sufficient funds in the 2016 Transportation Roads Operating Budget to cover the cost of the signs. Should the restrictions be made permanent following the pilot or in future, new traffic signal heads may be required.

6. Local Municipal Impact

The Town of Aurora is supportive of implementing a pilot project for left turn restrictions (buses excepted) on Yonge Street at Wellington Street, between 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., Monday to Friday, as per the 2015 Aurora Council resolution. York Region staff will work with Aurora staff to coordinate data collection, monitoring and communications to the public and stakeholders. As part of the public engagement, the Town of Aurora will be holding a public open house in mid-September to inform local residents and stakeholders of the upcoming pilot project.

7. Conclusion

Staff recommends implementing a pilot project for up to two months for northbound and southbound left turn restrictions (buses excepted) at the intersection of Yonge Street and Wellington Street, between the hours of 7:00 a.m. to 9:00 a.m., and 4:00 p.m. to 6:00 p.m., Monday to Friday. The temporary turn restriction bylaw for the pilot project is recommended to take effect between October 1, 2016, to December 31, 2016, to provide the sufficient time for staff to implement and enforce the pilot. It is further recommended the Commissioner of Transportation Services be authorized to terminate the pilot project prior to December 31, 2016, if deemed advisable to alleviate traffic congestion, address safety concerns or unacceptable impacts to the adjacent road network. Staff will assess the impacts of the pilot project and report back to Council in 2017 with the findings.

For more information on this report, please contact Angela Gibson, Acting Director, Infrastructure Management and PMO, at ext. 75949.

The Senior Management Group has reviewed this report.

August 25, 2016

Attachment (1)

Accessible formats or communication supports are available upon request

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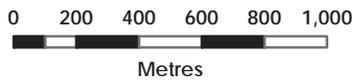


Temporary Left Turn Restriction

Yonge Street at Wellington Street
 Town of Aurora
 September 8, 2016

Data Collection Program*
 *Subject to Refinement

Produced by:
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 Corridor Control and Safety, Transportation Services
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Legend

- TMC Locations
- Bluetooth Sensor Locations
- - - ATR
- Travel Time Survey
- Queue Survey
- + Traffic Signal

