

Finch West Light Rail Transit – Temporary Traffic Regulation Amendments – Finch Avenue West at Elana Drive

Date: April 18, 2019

To: Etobicoke York Community Council

From: Director, Transportation Planning and Capital Program, Transportation Services

Wards: Ward 7 - Humber River-Black Creek

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Finch Avenue West, City Council approval of this report is required.

The purpose of this report is to seek Council approval for temporary removal of the existing westbound left-turn movement and southbound through traffic prohibition at the intersection of Finch Avenue West at York Gate Boulevard/Elana Drive for a 5 month period (June 1, 2019 to October 31, 2019). These temporary traffic by-law amendments will be monitored and used to inform staff recommendations for permanent amendments to the traffic by-laws at this intersection to enable the safe operation of the Finch West Light Rail Transit (LRT) service and access to the planned maintenance and storage facility.

RECOMMENDATIONS

The Director, Transportation Planning and Capital Program, Transportation Services recommends that:

1. City Council rescind the existing southbound through traffic prohibition in effect at all times at the intersection of Finch Avenue West and York Gate Boulevard/Elana Drive, from June 1, 2019 to October 31, 2019.
2. City Council prohibit the westbound left-turn movement at the intersection of Finch Avenue West and York Gate Boulevard/Elana Drive, from June 1, 2019 to October 31, 2019.
3. City Council request the Director, Transportation Planning and Capital Program, to report to the October 2019 Etobicoke York Community Council on the impacts of the temporary removal of the southbound through traffic prohibition and the temporary removal of the westbound left-turn movement at the intersection of Finch Avenue West and York Gate Boulevard/Elana Drive.

FINANCIAL IMPACT

There is no financial impact to the City of Toronto associated with the recommendations in this report. Metrolinx's contractor, Mosaic Transit Group, will be responsible for all costs related to the installation of approved signage, pavement markings, traffic signal timing adjustments and traffic monitoring studies.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

City Council, at its meeting of May 22, 2018, delegated to the General Manager, Transportation Services, the authority to temporarily close to pedestrian and vehicular traffic highways or portions of highways for a period up to and including 365 consecutive days, until March 31, 2020 with the exception of those highways listed in section 937-4 of Chapter 937, as required for the purpose of the construction of the Metrolinx Finch West LRT corridor. The Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.PW29.1>

City Council, at its meeting on December 4, 5 and 6, 2001, approved prohibition of southbound and northbound through movements at the intersection of Finch Avenue West at Elana Drive/York Gate Boulevard at all times. The Council decision can be found at:

<https://www.toronto.ca/legdocs/2001/agendas/council/cc011204/ny9rpt/cl016.pdf>

COMMENTS

The maintenance and storage facility for the Finch West Light Rail Transit (LRT) project will be constructed in the north-west quadrant of the intersection of Finch Avenue West and York Gate Boulevard/Elana Drive. Light Rail Vehicles (LRVs) will access the facility through York Gate Boulevard.

As part of the intersection redesign to accommodate the LRT, swept path analysis was undertaken to ensure the LRV turning movements can be safely accommodated. The swept path analysis revealed a number of concerns.

The maneuvering space required by a LRV to complete the westbound right-turn/southbound left-turn movement will conflict with the westbound left/U-turn vehicles. In order to remain clear of the LRV maneuvering space, the stop line for the westbound left/U-turn vehicles would need to be moved eastward by approximately 15 metres from its standard intersection stop line position. Relocation of the stop line creates its own concerns, including motorists' failure to stop at the designated location, vehicles continuing to turn after the end of the westbound left-turn signal phase, potential for

collision with the turning LRV and reduced visibility of north-south pedestrian movements.

The swept path analysis also demonstrated that the eastbound left-turn/southbound right-turn movement of the LRVs will conflict with the location of the primary traffic signal head for westbound movements. In order to avoid this conflict, the traffic signal pole for the westbound movements will need to be moved westward by approximately 15 metres from its standard location in the north-west corner of the intersection. This will result in a distance of approximately 75 metres between the stop line and primary traffic signal head for the westbound left/U-turn movement. This distance is in excess of the recommended 55 metre maximum distance as per the Ontario Traffic Manual Book (OTM) 12 guidelines and will present signal visibility issues, thereby increasing risks of rear end (stopping too late) and right-angle (entering the intersection) collisions.

Various options to relocate the westbound traffic signals were explored by Mosaic Transit Group (The Project Co.). These options included the following:

- Nearside aerial traffic signal for the westbound left/U-turn and through traffic movements
- Centre-intersection traffic signal Island for the westbound left/U-turn movements
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- Traffic signal Island for westbound left/U-turn movements

A safety audit was undertaken by the Project Co. to evaluate feasibility of these options which concluded:

- The option of installation of the nearside aerial traffic signals for the westbound left/U-turn and through traffic movements is inconsistent with the OTM Book 12 guidelines and will present safety issues of motorists' failure to comply, potential for collisions and reduced intersection performance. Therefore, this option is not recommended.
- The option of installation of a centre-intersection traffic signal island for the westbound left/U-turn movement will prevent the eastbound and southbound left-turn movements and present a hazard in the middle of the intersection. Therefore, this option is not recommended.
- The option of installation of the centre-intersection aerial traffic signal using the span cables is inconsistent with the OTM Book 12 guidelines and will present signal visibility issues within the clutter of wires for the LRT overhead catenary system (OCS). Additionally, it will present maintenance challenges for both the OCS and traffic signal. Therefore, this option is not recommended.
- The option of installation of a traffic signal island on the west side of the intersection within in the LRV swept path for the eastbound left/southbound right-turn movements was explored. However, the island location will require the west side pedestrian crosswalk to be shifted. Additionally, the traffic signal island will

act as a refuge area for the pedestrians and present a hazard to the westbound through traffic movements. Therefore, this option is not recommended.

Given the above mentioned safety concerns, elimination of the westbound left/U-turn movement was assessed.

Existing travel demand for the westbound left-turn movement was measured by conducting turning movement counts at the intersection of Finch Avenue West and York Gate Boulevard/Elana Drive. These counts were undertaken during the morning and afternoon peak hours in February 2019 and indicate a demand of 14 vehicles during the morning peak hour and 10 vehicles during the afternoon peak hour. The magnitude of this travel demand can be satisfactorily accommodated at the adjacent signalized intersections on Finch Avenue West.

With the elimination of the westbound left/U-turn movement, westbound motorists will be able to access Elana Drive by completing a left-turn at the intersection of Jane Street and Finch Avenue West and right-turn at the intersection of Firgrove Crescent and Jane Street. This rerouting option will result in additional driving distance of up to 400 metres.

Monitoring the impacts of elimination of the westbound left-turn movement and the removal of the existing southbound through traffic prohibition will be undertaken by Project Co. between June and September to enable the impacts to be evaluated and reported back to this Community Council in October 2019.

Councillor Anthony Perruzza's office has been advised of the recommendations of this staff report.

CONTACT

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SIGNATURE

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Transportation Services

ATTACHMENTS

Attachment 1: Finch West Light Rail Transit - Temporary Traffic Regulation
Amendments - Finch Avenue West at Elana Drive

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