

Traffic Control Signals - Duplex Avenue at Orchard View Boulevard and at Montgomery Avenue

Date: January 28, 2019

To: North York Community Council

From: Acting Director, Traffic Management, Transportation Services

Wards: Ward 8 - Eglinton-Lawrence

SUMMARY

This staff report is about a matter for which Community Council has delegated authority to make a final decision, provided that it is not amended so that it varies with City policy or by-laws.

Transportation Services is requesting North York Community Council to approve the installation of traffic control signals at the following two intersections:

- Duplex Avenue and Orchard View Boulevard; and
- Duplex Avenue and Montgomery Avenue.

The proposed traffic control signal installations are technically justified. These installations will address safety concerns for all intersection users and provide enhanced guidance over the current all-way stop sign controls at both intersections. These installations will result in the loss of approximately two parking spaces on Orchard View Boulevard and four parking spaces on Montgomery Avenue and may increase delays for pedestrians.

RECOMMENDATIONS

The Acting Director, Traffic Management, Transportation Services, recommends that North York Community Council:

1. Authorize the installation of traffic control signals at the intersection of Duplex Avenue and Orchard View Boulevard.
2. Subject to the approval of traffic control signals at the intersection of Duplex Avenue and Orchard View Boulevard, the existing all-way stop control on Duplex Avenue at Orchard View Boulevard be rescinded, coincident with the traffic control signal installation.

3. Authorize the installation of traffic control signals at the intersection of Duplex Avenue and Montgomery Avenue.
4. Subject to the approval of traffic control signals at the intersection of Duplex Avenue and Montgomery Avenue, the existing all-way stop control on Duplex Avenue at Montgomery Avenue be rescinded, coincident with the traffic control signal installation.

FINANCIAL IMPACT

The estimated cost of installing traffic control signals at the intersection of Duplex Avenue at Orchard View Boulevard is \$180,000.00. The estimated cost of installing traffic control signals at the intersection of Duplex Avenue at Montgomery Avenue is \$180,000.00. These installations would be considered in 2020, subject to the availability of funding and competing priorities.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

Transportation Services was requested by former Councillor Christin Carmichael Greb, on behalf of local residents, to review the feasibility of replacing the all-way stop sign controls on Duplex Avenue at Orchard View Boulevard and at Montgomery Avenue with traffic control signals. The requested traffic control signals are intended to address safety concerns for pedestrians and motorists at these intersections. Staff attended a site meeting at both intersections on May 28, 2018 with the former Councillor and area residents to discuss their ongoing concerns.

Existing Conditions

Duplex Avenue, north of Eglinton Avenue West, is a north-south minor arterial street. It has a daily two-way traffic volume of approximately 14,000 vehicles and a posted speed limit of 40 km/h. There are sidewalks on both sides of the street. It generally provides one lane of through traffic in both directions. Additionally, a northbound right turn lane is provided at the intersection with Orchard View Boulevard. Heavy vehicles are prohibited at all times and there is no TTC service provided on Duplex Avenue.

Orchard View Boulevard intersects Duplex Avenue approximately 150 metres north of Eglinton Avenue West. It is an east-west local street with a daily two-way traffic volume of approximately 5,000 vehicles. East of Duplex Avenue, it has a posted speed limit of 40 km/h and west of Duplex Avenue, it has a posted speed limit of 30 km/h, as speed

humps have been installed. There are sidewalks on both sides of the street. Heavy vehicles are prohibited at all times and there is no TTC service provided on Orchard View Boulevard.

Montgomery Avenue intersects Duplex Avenue approximately 150 metres north of Orchard View Boulevard. It is an east-west street that is classified as a local, west of Duplex Avenue and as a collector, east of Duplex Avenue. It has a daily two-way traffic volume of approximately 6,000 vehicles and a posted speed limit of 40 km/h. There are sidewalks on both sides of the street. Heavy vehicles are prohibited at all times and there is no TTC service provided on Montgomery Avenue.

The intersections on Duplex Avenue at Orchard View Boulevard and at Montgomery Avenue are controlled by all-way stop signs. At both intersections, there are pedestrian crossing lines which have been enhanced with zebra markings for greater visibility. Additionally, flashing red beacons have been installed on all four approaches to the intersection of Duplex Street and Orchard View Boulevard to re-inforce the existing stop controls.

The land use in this area is generally residential, comprising a mix of detached homes and high rise apartments. The significant pedestrian generators in the area include:

- the Toronto Public Library;
- Eglinton Park;
- North Toronto Community Memorial Centre; and
- the numerous commercial establishments fronting on Yonge Street and Eglinton Avenue West.

Traffic Control Signal (TCS)

Based on the eight hour vehicular and pedestrian traffic counts undertaken in May 2018 on Duplex Avenue at Orchard View Boulevard and at Montgomery Avenue, and the collision history, the technical justifications for the installation of traffic control signals are satisfied at these two intersections to the following extent:

Table 1: Duplex Avenue - Traffic Control Signal Warrant Criteria and Compliance

Criteria	Duplex Avenue at Orchard View Boulevard (May 2, 2018)	Duplex Avenue at Montgomery Avenue (May 15, 2018)
Minimum Vehicular Volume	100 percent	100 percent
Delay to Cross Traffic	98 percent	95 percent
Collision Hazard	7 percent	0 percent

To meet the numerical warrants for the installation of traffic control signals, one of the "Minimum Vehicle Volume" or "Delay to Cross Traffic" criteria must be 100 percent satisfied, or any two of the three criteria must be at least 80 percent satisfied. Based on

the above results, the installation of traffic control signals are justified at the intersections of Duplex Avenue at Orchard View Boulevard and at Montgomery Avenue.

Collision Review

The "Collision Hazard" justification is based on the number of collisions potentially preventable by the installation of traffic control signals. Collision statistics provided by the Toronto Police Service for the three-year period ending May 1, 2018 disclosed the following:

- At the intersection of Duplex Avenue and Orchard View Boulevard, four collisions in total were reported. Of these four collisions, one involved a pedestrian and one was considered to be potentially preventable by the installation of traffic control signals; and
- At intersection of Duplex Avenue and Montgomery Avenue, three collisions in total were reported. Of these three collisions, two involved a pedestrian and none were considered to be potentially preventable by the installation of traffic control signals.

Eglinton Crosstown LRT and Other Construction

It is noted that Eglinton Avenue is currently under construction as part of the Eglinton Crosstown Light Rail Transit (LRT) project. This activity and associated lane closures has increased delays and congestion for motorists in this area. Many motorists may seek alternate routes through residential neighbourhoods to avoid construction delays. It is also noted that Helendale Avenue, which is located between Orchard View Boulevard and Montgomery Avenue, has been closed to vehicular traffic at Yonge Street. This closure has been in place since 2015 to accommodate construction staging areas for developments on the north and south sides of the street.

Due to the proximity of these projects to the two subject intersections, a comparison of the current (2018) and historical (2003 and 2011) vehicle and pedestrian volumes was undertaken to assess changes in the traffic patterns or volumes. The results of this comparison are summarized in the attached Appendix A.

The comparison indicates moderate increases in the volume of traffic on Duplex Avenue over the last 15 years. The traffic on Montgomery Avenue has also increased by a moderate amount. Some of these increases could be attributed to traffic infiltration to avoid construction, but it is also noted that there has been significant residential development in this area over the comparison time period. This development is ongoing.

The traffic volume comparison indicated there have been substantial increases in motorist and pedestrian volumes on Orchard View Boulevard. A likely contributing factor to this trend has been the installation of traffic control signals at Yonge Street and Orchard View Boulevard/Roehampton Avenue (Item PW32.10) which occurred in

December 2015. It is likely this traffic control signal installation has resulted in more motorists and pedestrians using this street to access Yonge Street.

Summary

In view of the above study results, traffic control signals are warranted on Duplex Avenue at Orchard View Boulevard and at Montgomery Avenue and are recommended at both intersections. The installations will provide enhanced guidance over the current all-way stop sign control at both intersections. The previous enhancements to install zebra crossing lines and flashing beacons have not addressed the safety complaints from area residents.

The installation of traffic control signals will provide a safer crossing environment for pedestrians, especially children and senior citizens. However, the installation of traffic control signals at these intersections would result in the following negative impacts:

- Loss of parking spaces: Approximately two parking space on the south side of Orchard View Boulevard, west of Duplex Avenue and four permit parking spaces on the north side of Montgomery Avenue, east of Duplex Avenue will be removed as a result of the traffic control signal installations; and
- Pedestrian delays: There may be increase in delays to pedestrians, who will be required to wait for a "Walk" signal indication, rather than crossing at all-way stop control.

The Ward Councillor is aware of the recommendations of this staff report.

CONTACT

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SIGNATURE

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ATTACHMENTS

Attachment 1: Appendix A - Traffic Volume Comparison

Attachment 2: Map - Proposed Traffic Control Signals - Duplex Avenue at Orchard View Boulevard and at Montgomery Avenue