

All-Way Stop Control - Duncan Street and Nelson Street

Date: April 1, 2021

To: Toronto and East York Community Council

From: Director, Traffic Management, Transportation Services

Wards: Ward 10, Spadina - Fort York

SUMMARY

This staff report is about a matter that Community Council has delegated authority from City Council to make a final decision.

Transportation Services is requesting approval to install all-way stop control at the intersection of Duncan Street and Nelson Street. Based on the assessment undertaken, the installation of all-way stop control is recommended and should enhance safety for all road users.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. Toronto and East York Community Council authorize all-way compulsory stop control at the intersection of Duncan Street and Nelson Street.

FINANCIAL IMPACT

The estimated costs associated with the proposed installation is \$400.00. Funding is anticipated to be available within the Transportation Services 2022 Operating and Capital Budgets.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

At the request of a local resident through the Ward Councillor, Transportation Services investigated the feasibility of installing all-way stop control at the intersection of Duncan Street and Nelson Street.

Existing Conditions

Duncan Street is characterized by the following conditions:

- It is a two-lane, north-south, collector roadway
- It operates two-way traffic on a pavement width of approximately 14 metres
- The daily two-way traffic volume is approximately 4,700 vehicles
- The speed limit is 30 km/h
- Heavy trucks are permitted at all times
- There is no Toronto Transit Commission (TTC) service provided
- There are sidewalks located on both sides of this street

Nelson Street is characterized by the following conditions:

- It is a two-lane, east-west, local roadway
- It operates two-way traffic on a pavement width of approximately 9 metres
- The daily two-way traffic volume is approximately 2,200 vehicles
- The speed limit is 30 km/h
- Heavy trucks are permitted at all times
- There is no TTC service provided
- There are sidewalks located on both sides of this street

These two streets intersect to form a right-angled four-leg intersection, with right-of-way controlled by stop signs for eastbound and westbound traffic on Nelson Street.

Land use of this area is primarily both residential and commercial in nature.

A map of the area is included in Attachment 1.

Study Results

In order for all-way stop control to be warranted at an intersection established criteria must be satisfied. The warrants consist of four components, including collision history, total vehicle volume, combined vehicle and pedestrian volumes crossing the major road and the percentage of traffic on the major road.

Collision history provided by the Toronto Police Service for the three-year period ending January 31, 2022, disclosed that four reported collisions occurred at this intersection of which none involved pedestrians or cyclists. All of these collisions were considered potentially preventable by the installation of all-way stop control.

Transportation Services conducted an all-way stop control study on November 3, 2021 at the subject intersection. The results of the study were evaluated against the warrant criteria for all-way stop control as adopted by City Council. The evaluation is summarized in Table 1.

Table 1: All-Way Stop Control Study at Duncan Street and Nelson Street

No.	Warrant Type	Actual	Required	Satisfied (Yes/No)
A	Number of Potentially Preventable Collisions (January 1, 2019 to January 31, 2022)	4	9	No
B1	Average Vehicle Volumes	455/hour	375/hour	Yes
B2	Combined Vehicle & Pedestrian Volumes Crossing Major Road (Average)	364 /hour	150/hour	Yes
B3	Percentage of Traffic on Major Street	45%	≤70%	Yes

In order for the all-way stop control to be technically warranted, either Warrant A must be met or Warrant B1 or B2 combined with Warrant B3 must be achieved. Based on the study results, the technical warrants for the installation of all-way stop control are satisfied. Therefore, it is recommended that all-way stop control be installed at the intersection of Duncan Street and Nelson Street.

The Ward Councillor has been advised of the recommendation of this staff report.

CONTACT

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SIGNATURE

for
Roger Browne, M.A.Sc., P. Eng.
Director, Traffic Management, Transportation Services

ATTACHMENTS

Attachment 1: Map - All-Way Stop Control - Duncan Street and Nelson Street

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