

## **Traffic Control Signals - Danforth Road at Seminoff Street**

**Date:** January 16, 2020

**To:** Scarborough Community Council

**From:** Acting Director, Traffic Management, Transportation Services

**Wards:** Ward 20 – Scarborough Southwest

### **SUMMARY**

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As the Toronto Transit Commission (TTC) operates bus service on Danforth Road, City Council approval of this report is required.

Transportation Services staff has reviewed the feasibility of installing traffic control signals or a pedestrian crossover (PXO) on Danforth Road at Seminoff Street.

The installation of a PXO is justified, however, based on the safety audit of this location, the environmental suitability for a PXO was not satisfied, given that the operating speed is equal to or greater than 60 km/h on Danforth Road. As an alternative, installing traffic control signals at this location would provide a safe and convenient access for pedestrians crossing Danforth Road.

This report recommends that the installation of traffic control signals be authorized at the intersection of Danforth Road and Seminoff Street, as the existing conditions do meet the warrant for the pedestrian crossing protection and are supported under traffic engineering judgment.

### **RECOMMENDATIONS**

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The Acting Director, Traffic Management, Transportation Services recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Danforth Road and Seminoff Street.

## **FINANCIAL IMPACT**

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The estimated cost of installing traffic control signals at Danforth Road and Seminoff Street is approximately \$200,000. This installation will be considered in 2021, subject to availability of funding and competing priorities.

## **DECISION HISTORY**

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This report addresses a new initiative.

## **COMMENTS**

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Transportation Services staff was requested by the Ward Councillor, on behalf of area residents, to review the feasibility of installing traffic control signals or a PXO at Danforth Road and Seminoff Street.

### **Existing Conditions**

Danforth Road is classified as minor arterial road, and operates two-way north-south, with a posted speed limit of 60 km/h. However, it should be noted, at its meeting on December 3, 2019, Scarborough Community Council adopted a speed limit reduction on Danforth Road, between Danforth Avenue and St. Clair Avenue East ([SC11.8](#)) to 50 km/h. Signs reflecting the speed limit reduction will be installed in the near future based on available funds and competing priorities. Sidewalks are located on both sides of the street. At the intersection, there are two lanes of travel in each direction, as well as a centre left turn lane for northbound motorists.

Seminoff Street is classified as a local road, and operates two-way east-west, with a regulatory speed limit of 50 km/h, and sidewalks are located on the north side of the street.

The intersection of Danforth Road and Seminoff Street forms a "T" type intersection. Northbound and southbound traffic on Danforth Road is free-flow. As Danforth Road is designated as a through highway, eastbound traffic on Seminoff Street is stop-controlled at Danforth Road. Adjacent traffic control signals are located approximately 205 metres to the north at Danforth Road and Pilkington Drive, and approximately 330 metres to the south at Danforth Road and Mack Avenue.

The TTC operates the "113 Danforth" bus service on Danforth Road, and there are northbound and southbound TTC bus stops near the intersection. The land use in this area is a mix of residential, business, commercial and a mosque.

## Analysis

### *Traffic Control Signal Justification Study*

Using traffic volumes recorded during the peak eight hours on Friday, May 10, 2019, the following results were obtained:

Traffic Control Signal Warrant	Compliance Level
Minimum Vehicular Volume	17%
Delay To Cross Traffic	28%
Collision Hazard	7%

In order to meet the warrant for Traffic Control Signals, one of the "Minimum Vehicular Volume" or "Delay to Cross Traffic" or "Collision Hazard" warrants must be 100 percent satisfied, or both the "Minimum Vehicular Volume" and "Delay to Cross Traffic" warrants must be at least 80 percent satisfied. Our review of the Collision Hazard is based on the previous three-year (2016 – 2018) collision history available.

Although the warrants for traffic control signals at the intersection of Danforth Road and Seminoff Road are not satisfied, the location was reviewed against the criteria in the Environmental Pedestrian Crossover Safety Audit as shown in Attachment 2. A PXO is considered environmentally suitable if the operating speed is less than 60 km/h, there are four lanes or less on a two-way street, and the traffic volume is less than or equal to 35,000 vehicles per day. Our review of the criteria found in the safety audit, indicates that a PXO is not suitable for this location, specifically because the operating speed is higher than 60 km/h. Therefore, it is recommended that traffic control signals be installed at this intersection to provide safer and controlled crossing for pedestrians.

### *Pedestrian Crossing Protection Study*

Using traffic volumes recorded during the peak eight hours on Friday, May 10, 2019, the following results were obtained:

Pedestrian Crossing Protection	Compliance Level
Pedestrian Volumes	100%
Pedestrian Delays	100%

For a PXO to be numerically justified, both the "Pedestrian Volume" and "Pedestrian Delays" warrants must be 100 percent satisfied.

As outlined in the above table, the pedestrian volumes and delays do satisfy the requirements to install a PXO at the subject intersection at this time.

This study has been evaluated using the updated warrant calculations as adopted by City Council on July 16, 2019 in the Vision Zero 2.0 Road Safety Plan report (Item EE6.8). During the peak eight-hour study period, a total of 192 pedestrian crossings was recorded. For a PXO to be numerically justified at this intersection, the required "Pedestrian Volume" must exceed 100 pedestrians crossing Danforth Road during the peak eight-hour period.

### *Collision History*

An updated review of the available Toronto Police Service collision records for the three-year period ending December 31, 2018 is summarised below:

Three-Year Collision Information	Number of Reported Collisions (By Year)			
	2016	2017	2018	Total
Collisions Potentially Preventable by the Installation of Traffic Control Signals	0	0	1	1
Collisions Involving Pedestrians Crossing Danforth Road	0	0	1	1

Councillor Gary Crawford has been advised of the recommendations of this staff report.

## **CONTACT**

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## **SIGNATURE**

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DH:cr

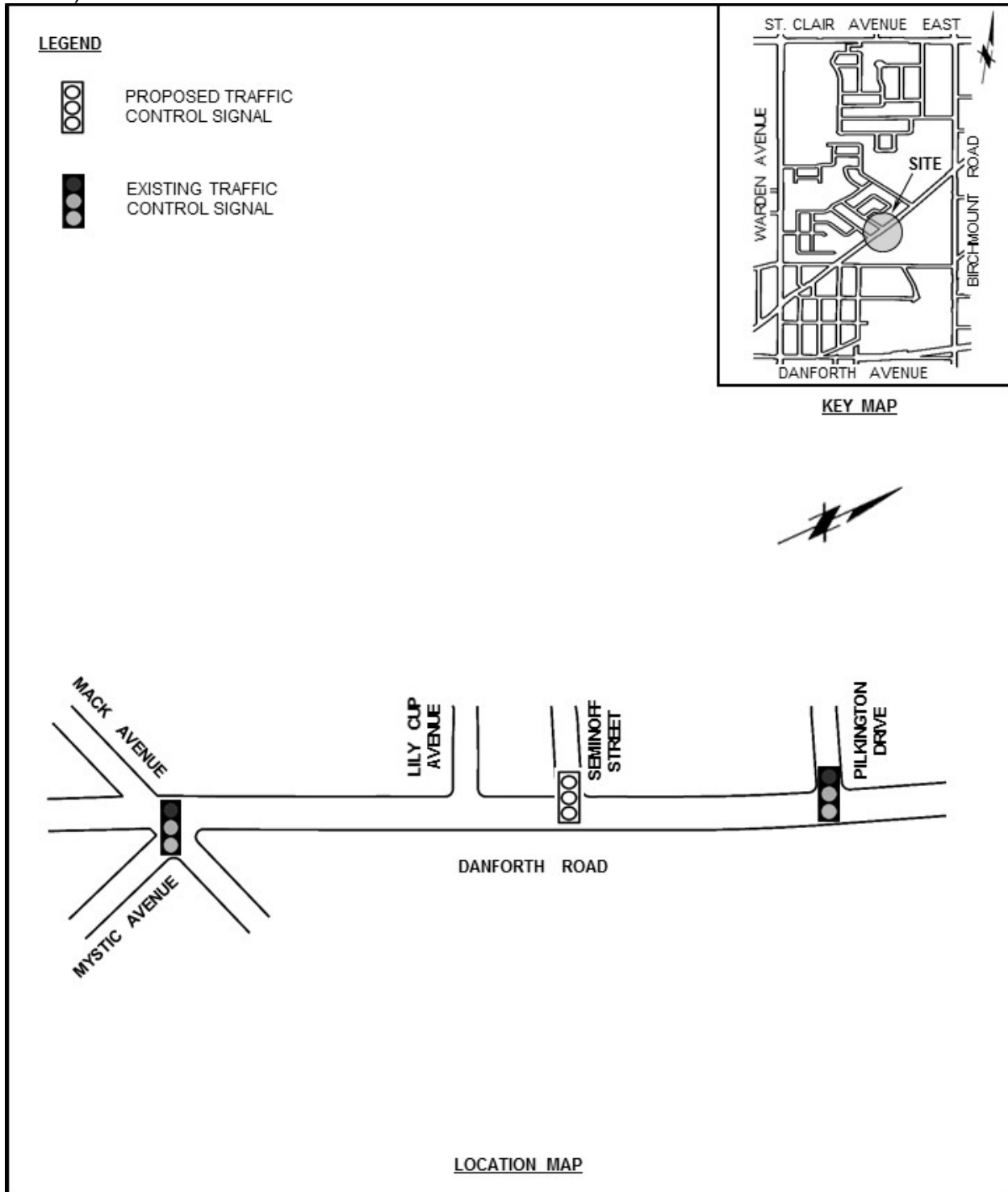
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## **ATTACHMENTS**

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1. Attachment 1 - Location Plan (Traffic Control Signals - Danforth Road at Seminoff Street).
2. Attachment 2 - Environmental Pedestrian Crossover Safety Audit - Danforth Road and Seminoff Street.

Attachment 1 - Location Plan (Traffic Control Signals - Danforth Road and Seminoff Street)



<b>TORONTO</b> TRANSPORTATION SERVICES		TRAFFIC OPERATIONS Scarborough District	
SCALE:	N.T.S.	<b>TRAFFIC CONTROL SIGNALS DANFORTH ROAD AT SEMINOFF STREET</b>	
DATE:	JAN., 2020		
DRAFTING:	O.K.		
		FILE NUMBER:	
		D19-9489784, D19-9380524	
		ATTACHMENT	WARD
		1	20

Attachment 2 - Environmental Pedestrian Crossover Safety Audit

Attachment 2 - Environmental Pedestrian Crossover Safety Audit  
Danforth Road and Seminoff Street

Standards or Criteria to be Met for Physical Suitability of a PXO	Met/ Not Met	Comment
Vehicle operating speed less than 60 km/h	Not Met	85th percentile is 69 Km/h
Not more than four lanes wide on a two-way street, or more than three lanes wide on a one-way street.	Met	Four Lanes
Traffic volume less than 35,000 vehicles per day (total both directions)	Met	9,967 vehicles per day
No driveways or entrances nearby	Not Met	Driveway for businesses on both sides of Danforth Road
No significant volume of turning movements which interfere with PXO.	Not Met	Mosque Driveway
No visibility problems exist for either pedestrians or motorists.	Met	No significant sightline issues
No loading zones (including TTC) in the immediate vicinity.	Met	No loading zones or TTC Bus Stops
Not less than 200 metres to another PXO or traffic control device.	Met	Traffic signal located 204 metres north of intersection