

Traffic Control Signals Review – 4325 McCowan Road

Date: March 15, 2018
To: Scarborough Community Council
From: Director, Transportation Services, Scarborough District
Wards: Ward 41 – Scarborough Rouge River

SUMMARY

This report recommends that traffic control signals be approved at the intersection of the driveway of 4325 McCowan Road despite the existing conditions do not meet the warrant for the installation of traffic control signals or a pedestrian crossover (PXO) at this time. This location is currently uncontrolled.

RECOMMENDATIONS

The Director, Transportation Services, Scarborough District recommends that:

1. City Council authorize the installation of traffic control signals at 4325 McCowan Road at the driveway to Milliken Park Community Recreation Centre.

FINANCIAL IMPACT

There is financial impact associated with this report.

Should City Council approve the installation of traffic control signals, the cost would be approximately \$200,000.00. Funding for such traffic control signals has not been requested in the Transportation Services Capital Budget and would be subject to competing priorities.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

This report responds to a request from Councillor Lee to review the possibility of installing a traffic control signal at 4325 McCowan Road at the driveway to Milliken Park Community Recreation Centre.

As a result of the request, Transportation Services staff conducted a traffic control signal and pedestrian crossing protection review at the recreation centre driveway at 4325 McCowan Road.

Since the subject recreation centre is busy on weekdays as well as weekends, field studies were conducted on both Wednesday, November 8, 2017 and Saturday, November 4, 2017. The studies observed vehicle traffic and pedestrian volumes and delays at the driveway to 4325 McCowan Road and in the 100 metre area north and south of the driveway. The studies also included pedestrian crossings generated by the two transit stops (northbound stop located 35 metres south and southbound stop located 55 metres south of the driveway) and also the pedestrians generated by the walkway to Enchanted Hills Crescent (located on the west side of McCowan Road approximately 40 metres south of the subject driveway).

Existing Conditions

The following characteristics describe the subject portion of McCowan Road:

- The subject portion of McCowan Road is located south of Steeles Avenue East.
- This portion of McCowan Road is a major arterial road with two northbound lanes and two southbound lanes and also a southbound left turn lane to the recreation centre driveway at 4325 McCowan Road. The posted speed limit of McCowan Road 60 kilometres per hour with an 85th percentile speed of 69 km/h. The 24-hour traffic volume is approximately 22,750 vehicles per day.
- The land uses on this portion of McCowan Road are primarily single family dwellings with backyards facing McCowan Road and a recreational use (Milliken Park as well as a recreation centre).
- The driveway to 4325 McCowan Road is located approximately 200 metres south of the traffic signals at Steeles Avenue East and 260 metres north of the traffic signals at McCowan Road and Alton Towers Circle (north intersection).
- There are sidewalks along both sides of McCowan Road.
- There is street lighting located along the east side of McCowan Road.

- The Toronto Transit Commission (TTC) bus stops are located 230 metres south of Steeles Avenue East for southbound passengers and 210 metres north of Alton Towers Circle (north intersection).
- Following the TTC review of these mid-block stop distances, they are recommending the elimination of these stops in the vicinity of the Community Centre as a means to remove the need for pedestrians to cross at the these sites.

Analysis

Pedestrian Crossing Protection Study

Transportation Services staff conducted detailed Warrant Studies at the driveway to Milliken Park Community Recreation Centre at 4325 McCowan Road. The studies provide an assessment of the need for a pedestrian crossing protection based on vehicle volumes and pedestrian crossing volumes and delays, which are expressed in terms of percent compliance with accepted thresholds.

The following Pedestrian Crossing Protection Study results were obtained:

Pedestrian Crossing Protection	Compliance Level - Wednesday, November 8, 2017	Compliance Level - Saturday, November 4, 2017
Pedestrian Volume	26 (11%)	28 (12%)
Pedestrian Delays	10 (8%)	14 (11%)

For a pedestrian crossover to be numerically justified, the required "Pedestrian Volume" must exceed 236 pedestrians crossing McCowan Road in the peak eight-hour period. In this case there were only 26 pedestrians observed crossing during the study period on Wednesday, November 8, 2017 and only 28 pedestrians observed crossing during the study period on Saturday, November 4, 2017. Of the 26 pedestrians on the Wednesday, 10 pedestrians experienced crossing delays greater than 10 seconds while waiting to cross McCowan Road. Of the 26 pedestrians on Wednesday, 10 adults and 16 seniors. Of the 28 pedestrians on Saturday, a total of 14 pedestrians experienced crossing delays greater than 10 seconds while waiting to cross McCowan Road and the 28 pedestrians were comprised of 24 adults and 2 seniors and 2 assisted children.

For pedestrian crossing protection to be numerically justified, both the "Pedestrian Volume" and "Pedestrian Delays" warrants must be 100% satisfied.

As outlined in the above table, the pedestrian volumes and delays do not satisfy the requirements to install pedestrian traffic control signals at the subject intersection at this time.

In addition, the 85th percentile traffic speed of 69 km/h along McCowan Road exceeds the guideline of 60 km/h or less for which a pedestrian crossover is considered safe to use.

Analysis (Continued)

Traffic Control Signal Justification Study

Using traffic volumes recorded over the peak eight hours of a typical weekday (Wednesday) and a weekend day (Saturday) the following results were obtained:

Traffic Control Signal Warrant	Compliance Level - Wednesday, November 8, 2017	Compliance Level - Saturday, November 4, 2017
Minimum Vehicular Volume	11%	20%
Delay To Cross Traffic	25%	45%
Collision Hazard	20%	20%

For traffic control signals to be numerically justified, one of the "Minimum Vehicular Volume" or "Delay to Cross Traffic" or Collision Hazard" warrants must be 100% satisfied, or both "Minimum Vehicle Volume" and "Delay to Cross Traffic" must be at least 80% satisfied. Our review of the Collision Hazard at the time was based on the most recent three-year (2014 - 2016) collision history available.

As outlined in the above tables, the traffic volumes do not satisfy the warrants to install traffic control signals.

Collision History

An updated review of the available Toronto Police Service collision records for the five-year, nine-month period ending September 30, 2017 are summarised below:

Collisions on McCowan Road in the area of the driveway to 4325 McCowan Road:

Five-Year Collision	2012	2013	2014	2015	2016	2017*	Total
Collisions potentially Preventable by Traffic Control Signals	0	0	1 (Pedestrian)	1	1	1*,1	4
Collisions involving Pedestrian or Cyclists Crossing McCowan Road	0	0	1 (See Signal Preventable Above)	0	0	1* (see above)	2 (also signal preventable)
Other Collisions	1	1	0	1	0	0	3

The 2014 pedestrian collision involved a southbound vehicle which struck a senior pedestrian crossing westbound across McCowan Road and suffered minor injuries. The 2015 and 2016 traffic signal preventable collisions, which did not result in injuries, both involved westbound vehicles exiting left from the driveway at 4325 McCowan Road which were struck by vehicles northbound on McCowan Road.

The collision data for 2017 is available only until the end of September 2017*. On September 28, 2017 during the evening, a westbound crossing senior pedestrian at a midblock location by 4325 McCowan Road was struck by a southbound motorist. The pedestrian sustained fatal injuries. In addition, a turning judgement error collision on January 2017 involving a motorist turning from the driveway at 4325 McCowan Road and impacting with a northbound motorist could have been potentially prevented if traffic control signals were in place. In this collision, minimal personal damages were recorded.

Notwithstanding the pedestrian crossover and traffic control signal warrants not being met, Transportation Services acknowledges merit in the installation of traffic control signals at this site. Key to these additional considerations is the significant spacing between traffic controls along this section of McCowan Road and the recorded 85th percentile speed.

Pedestrian crossing protection in the form of traffic control signals at the driveway to 4335 McCowan Road will facilitate a link to the residential dwellings to the west and a community recreation centre to the east and will promote a safe crossing and enhanced mobility.

CONTACT

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SIGNATURE

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ATTACHMENTS

1. Location Plan (Traffic Control Signals Review - 4325 McCowan Road)

