

Pedestrian Crossing Protection - Cosburn Avenue and Gledhill Avenue

Date: November 3, 2021

To: Toronto and East York Community Council

From: Acting Director, Traffic Management, Transportation Services

Wards: Ward 19, Beaches - East York

SUMMARY

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

At its meeting of June 8, 2021, City Council directed Transportation Services' staff to review and report back on the feasibility of installing pedestrian crossing protection on Cosburn Avenue, between Gledhill Avenue and Oak Park Avenue, and to begin the preparation of the necessary drawings.

Based on the assessment undertaken, Transportation Services recommends the installation of a pedestrian crossover (PXO) at Cosburn Avenue and Gledhill Avenue. The proposed PXO will provide a safe and convenient crossing of Cosburn Avenue for all pedestrians, including TTC passengers, users of Stan Wadlow Park and students destined to/from D.A. Morrison Middle School.

RECOMMENDATIONS

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

1. City Council authorize the installation of a pedestrian crossover at the intersection of Cosburn Avenue and Gledhill Avenue.

FINANCIAL IMPACT

The estimated cost for installing a PXO at Cosburn Avenue and Gledhill Avenue is \$50,000.00. Funding would be subject to availability and competing priorities within the Transportation Services 2022 Capital Budget.

DECISION HISTORY

At its meeting on June 8, 2021, City Council adopted Item PH23.4 (Modular Housing Initiative: Phase Two - 20 Bracebridge Avenue (Trenton Avenue and Cedarvale Avenue) - Final Report), directing Transportation Services staff to initiate a warrant study and prepare drawings for a pedestrian crossing on Cosburn Avenue, between Oak Park Avenue and Gledhill Avenue. The City Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.PH23.4>

COMMENTS

Transportation Services staff was directed by City Council to review the need for pedestrian crossing protection on Cosburn Avenue, between Gledhill Avenue and Oak Park Avenue.

Existing Conditions

Cosburn Avenue, in the vicinity of Gledhill Avenue and Oak Park Avenue, is characterized by the following conditions:

- It is an east-west, collector roadway
- It operates two-way traffic on a pavement width of approximately 12 metres
- It provides a single lane of traffic in each direction, as well as bicycle lanes on both sides of the roadway
- The daily two-way traffic volume is approximately 3,000 vehicles
- The speed limit is 30 km/h
- Heavy trucks are prohibited at all times
- There is TTC service provided by the 404 - East York Community Bus and 87A/87C Cosburn buses with near-side stops at Gledhill Avenue
- There are sidewalks located on both sides of the street

The adjacent land use in this area is a mix of residential and recreational. Stan Wadlow Park is located on the north side of Cosburn Avenue, with a pedestrian entrance located between Gledhill Avenue and Oak Park Avenue. East York Sports Centre/East York Curling Club is located on the south side of Cosburn Avenue and has a surface parking lot on the south side of the street. D.A. Morrison Middle School is located one block south of Cosburn Avenue between the subject limits.

Gledhill Avenue and Oak Park Avenue are both local streets that intersect the south side of Cosburn Avenue to form "T" type intersections. These two streets are located approximately 60 metres apart and are controlled by stop signs for northbound traffic. East/west traffic on Cosburn Avenue is free-flow in this section.

The closest adjacent traffic control signals are located at Cosburn Avenue and Cedarvale Avenue, approximately 195 metres to the west of Gledhill Avenue.

A map of the area is shown in Attachment 1.

Transportation Services has reviewed the need for either a PXO or traffic control signals in this road section to determine if either should be recommended as an appropriate pedestrian crossing protection device.

Pedestrian Crossover (PXO)

To determine the need for a PXO on Cosburn Avenue, between Gledhill Avenue and Oak Park Avenue, staff rely on the justification criteria as outlined in the Ontario Traffic Manual (OTM) Book 12. The OTM justification criteria includes two main factors: the volume of vehicles and pedestrians, and pedestrian delay to cross traffic.

The review of historic counts on the subject section of Cosburn Avenue disclosed the only eight-hour pedestrian volume and delay study available was conducted at Gledhill Avenue on February 22, 2016. Due to COVID-19, traffic investigations that require the collection of pedestrian/vehicle volume information was suspended at the time of this review due to the reduced and frequent fluctuation of traffic volumes.

Accordingly, the 2016 study was utilized for the pedestrian volume and delay study. This study recorded the total volume and number of delayed pedestrians crossing. Seniors, unassisted children and people with disabilities that are observed crossing are given a higher weighting by a factor of two. The compliance level of the study results in relation to the warrant criteria is shown in Table 1 below.

Table 1: Pedestrian Crossover Warrant Criteria and Compliance on Cosburn Avenue and Gledhill Avenue

Justification	Compliance
Pedestrian Volume	56%
Pedestrian Delay	91%

Based on the traffic volume on Cosburn Avenue at Gledhill Avenue, the warrants require a minimum of 694 pedestrians crossing over eight hours. Also, based on the pedestrian crossing volume, at least 75 pedestrians must be delayed more than 10 seconds.

In order to meet the warrant criteria, 100 percent compliance is required in both categories. Based on the results of the study, a PXO is not technically justified as the compliance levels did not meet the minimum requirements.

Staff's review of the collision history provided by the Toronto Police Service for the three-year period ending October 17, 2021 disclosed no collisions at this intersection that involved crossing pedestrians.

In addition to the technical criteria, consideration is given to the surrounding area and the collision history. Engineering judgement may be applied to recommend a PXO even if the number of pedestrians does not meet the threshold of the technical warrants. In view of the long spacing to the adjacent pedestrian crossing protection on Cosburn Avenue, Transportation Services further considered the installation of a pedestrian crossover on Cosburn Avenue, east of Gledhill Avenue, for the following reasons:

- there are transit stops in both directions on Cosburn Avenue at the intersection that attract pedestrians to cross the street
- there are pedestrian generators in the immediate area, including the park and community centre on the north side and the school on the south side, that will attract vulnerable pedestrian to cross Cosburn Avenue. The park entrance on the north side of the street will be adjacent to the proposed PXO

Details of the PXO audit are included in Attachment 2. As noted, there are no factors that would make a potential PXO at this location unsuitable or unsafe, except for the proximity of the TTC stops. The transit stops will be reviewed as part of the detailed PXO design, which has been initiated.

Traffic Control Signals

To determine the need for traffic control signals at the intersections of Cosburn Avenue and Gledhill Avenue and Cosburn Avenue and Oak Park Avenue, staff rely on the justification criteria as outlined in the OTM Book 12. The OTM justification criteria includes factors such as volume of vehicles and pedestrians, delay to cross traffic, and collision history. In addition to these technical justifications, staff consider an environmental checklist which includes consideration of road width, posted speed limit, vehicle operating speeds, adjacent land uses, pedestrian desire lines and demographics, presence of a transit stop, sight lines, and distance between existing crossing opportunities.

Staff conducted vehicle and pedestrian counts at Cosburn Avenue and Gledhill Avenue on February 22, 2016 and at Cosburn Avenue and Oak Park Avenue on October 1, 2020. Collision history provided by the Toronto Police Service for the three-year period ending October 17, 2021 disclosed no collisions at either intersection that were potentially preventable by the installation of traffic control signals. The results of the counts and collision hazard are summarized in Tables 2 and 3. The "Collision hazard" criterion is based on the number of collisions potentially preventable by the installation of traffic control signals.

Table 2: Warrant Compliance - Cosburn Avenue at Gledhill Avenue

Justification	Compliance level
Minimum vehicular volume	11%
Delay to cross traffic (pedestrians and vehicles)	45%
Collision hazard	0%

Table 3: Warrant Compliance - Cosburn Avenue at Oak Park Avenue

Justification	Compliance level
Minimum vehicular volume	14%
Delay to cross traffic (pedestrians and vehicles)	47%
Collision hazard	0%

To meet the technical justification criteria for the installation of traffic control signals, one of the justifications must be 100 percent satisfied or any two of the three justifications must be at least 80 percent satisfied. Based on the results in Table 2 and 3, the installation of traffic control signals is not justified at either intersection.

Transportation Services does not recommend the installation of traffic control signals as they are not justified based on the technical and environmental criteria that was evaluated. As noted, a PXO is recommended at Cosburn Avenue and Gledhill Avenue to address the concerns with pedestrian crossing safety and is the most appropriate form of control for the conditions at the intersection.

The proposed installation of a PXO on Cosburn Avenue at Gledhill Avenue would result in the following negative impacts:

- There is potential for increase in delays to transit service on Cosburn Avenue
- The TTC will need to relocate their westbound transit stop on the north side of Cosburn Avenue, east of Gledhill Avenue

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

CONTACT

Dan Clement, CET, Acting Manager Traffic Operations (Area 1), Transportation Services, 416-397-5021, Dan.Clement@toronto.ca

SIGNATURE

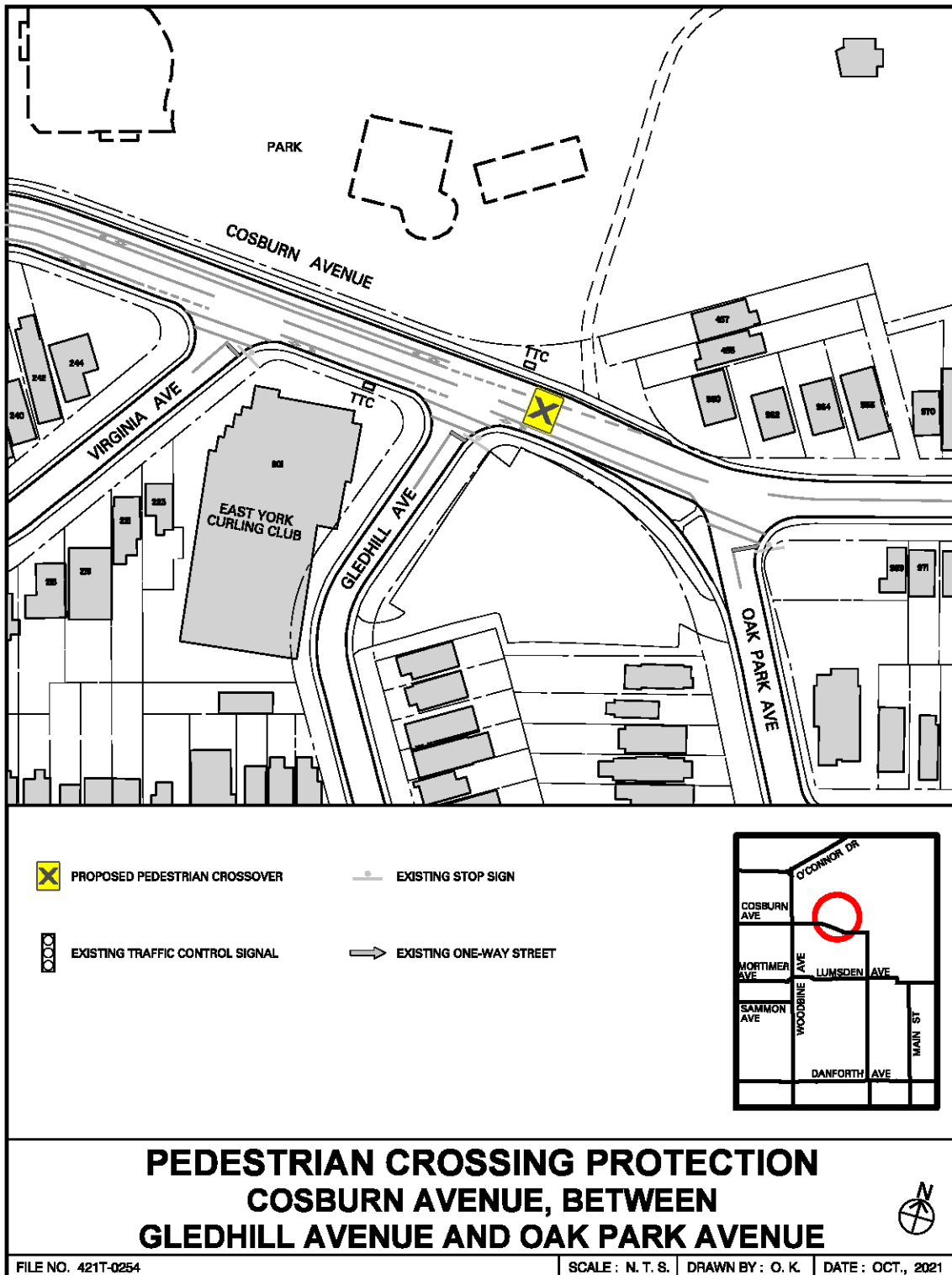
for
Roger Browne, M.A.Sc., P. Eng.
Acting Director, Traffic Management, Transportation Services

ATTACHMENTS

Attachment 1: Map - Pedestrian Crossing Protection - Cosburn Avenue, between Gledhill Avenue and Oak Park Avenue

Attachment 2: Environmental Safety Audit - PXO - Cosburn Avenue and Gledhill Avenue

Attachment 1: Map - Pedestrian Crossing Protection - Cosburn Avenue, between Gledhill Avenue and Oak Park Avenue



Attachment 2: Environmental Safety Audit - PXO - Cosburn Avenue and Gledhill Avenue

Standard	Comments	Standard Met/Not Met
Vehicle operating speed less than 60 km/h	The posted speed limit on Cosburn Avenue is 40 km/h.	Met
Not more than four lanes wide on a two-way street or more than three lanes wide on a one-way street	Cosburn Avenue operates with two lanes in each direction.	Met
Traffic volume not more than 35,000 vehicles per day	Cosburn Avenue carries approximately 3,000 vehicles per day.	Met
No significant volume of turning movements	The volume of traffic turning to/from Cosburn Avenue is moderate (approx. 384 vehicles over busiest eight hours)	Met
No visibility problems exist for either pedestrians or motorists	Example: No vertical or horizontal curves at intersection.	Met
No loading zones (including TTC) in the immediate area	TTC stops are located near side.	Not Met
No driveways or entrances nearby	No driveways in the vicinity.	Met
Spacing is not less than 200 metres to another pedestrian crossover or traffic control signal	Cedarvale Avenue (TCS) - 195 metres west	Met