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| Presented To: | Operations Committee   |
| Presented:    | Monday, Aug 12, 2019   |
| Report Date   | Thursday, Jul 18, 2019 |
| Type:         | Managers' Reports      |

## Request for Decision

### Annual Pedestrian Crossover Program Update

#### Resolution

THAT the City of Greater Sudbury implements a pedestrian crossover on Van Horne Street and Shaughnessy Street and prohibits parking and stopping within 30 metres of the pedestrian crossover to be installed;

AND THAT staff be directed to prepare a by-law to amend Traffic and Parking By-Law 2010-1 to implement the recommended changes, as outlined in the report entitled "Annual Pedestrian Crossover Program Update", from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting on August 12, 2019.

#### Relationship to the Strategic Plan / Health Impact Assessment

This report refers to “providing quality multimodal transportation alternatives for roads, transit, trails, paths, sidewalks, and connecting neighbourhoods and communities within Greater Sudbury” which is identified in the Strategic Plan under the strategic objective of Create A Healthier Community.

#### Report Summary

This report presents an update on the City of Greater Sudbury Pedestrian Crossover Program, including information on monitoring and compliance of those pedestrian crossovers installed in previous years. This report also seeks approval of locations proposed for new pedestrian crossovers to be installed in 2020.

#### Financial Implications

The estimated cost to implement the recommended pedestrian crossovers for 2020 is \$100,000. Funding for the new pedestrian crossover will be reviewed as part of the 2020 capital budget prioritization process.

#### Signed By

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##### **Recommended by the Department**

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##### **Recommended by the C.A.O.**

Ed Archer  
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# Annual Pedestrian Crossover Program Update

## Background:

In May 2016, a report entitled "[Pedestrian Crossover Facilities](#)" was presented to Operations Committee. The report provided an overview of this new tool and recommended that an annual report prioritizing the installation of pedestrian crossovers (PXOs) based on existing and anticipated pedestrian volumes be presented to the Committee. This report has been prepared to fulfill that commitment.

In 2017 and 2018, the annual [Pedestrian Crossover Program Update](#) report was presented to the Operations Committee highlighting new crossovers to be installed, as well as reporting on monitoring and compliance of previously installed PXOs. As part of that report, staff committed to bring forward future reports to highlight results of analysis conducted to determine whether pedestrian crossovers requested by members of the public were warranted.

This update is being presented at this time, so that potential new pedestrian crossovers locations that were evaluated in 2019 can be approved and installed in 2020.

## Monitoring Program Update:

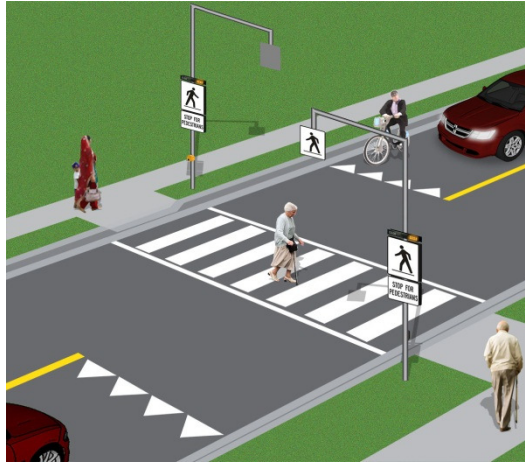
When the Pedestrian Crossover Program for the City was initially developed in 2016, an approach to monitor the success of the program was also planned to ensure the PXOs are achieving their objective of improving pedestrian safety in Greater Sudbury.

To measure motorist compliance, traffic cameras were used to record pedestrian and motorist movements at the various PXOs. To determine motorist compliance, staff were specifically looking for two behaviours: 1) did the approaching motorist stop when a pedestrian was present at the side of the road and 2) did the motorist remain stopped until the pedestrian had completely left the roadway.

Pedestrian compliance is somewhat more difficult to determine, as per the *Highway Traffic Act*, the presence of the 'Stop for Pedestrians' signs are all that is required for motorists to have to stop to allow pedestrians to cross the road. In addition, when flashing beacons are present at the PXO, pedestrians are not required to activate them prior to crossing. Rather, they are required to enter the road only when there would be adequate time for an approaching vehicle to stop. The flashing beacons are a supplemental device which helps draw the attention of motorists that a pedestrian is waiting to cross the road.

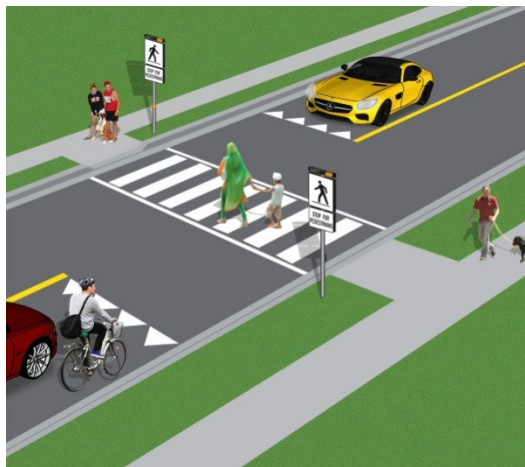
## PXO Type B and Type C Compliance

The type B PXO consists of a roadside mounted regulatory and warning signs leading to a crossing in both directions with an overhead sign, a rapid rectangular flashing beacon (RRFB) with Tell Tale on top of the roadside mounted sign and pavement markings prescribed by Ontario Regulation 615 as illustrated in the layout below.



This system uses both the side mounted and overhead regulatory signs. This type of PXO is designed for medium volume, speed less than 60 km/h, single or multilane roadway, such as major collectors, arterial and high volume multilane roundabouts

Type C consists of regulatory and warning signs, RRFB and pavement markings prescribed by Ontario Regulation 615 as illustrated in the layout below. The system uses only side mounted regulatory signs. This type of PXO is designed for medium volume, speed limited less than 60 km/h, single lane roadway such as major collectors and low volume multilane roundabouts.



Staff reviewed 9 Type B and Type C crossings to measure vehicle and pedestrian compliance. Table 1 below shows the results for each location.

**Table 1. Type B and Type C Locations Monitored for Pedestrian and Motorist Compliance in 2018/2019**

| <b>Type B and C Pedestrian Crossing Locations</b> |  |                    |                       |
|---|--|--------------------|-----------------------|
| Type  | Location                                       | Vehicle Compliance | Pedestrian Compliance |
| B   | MR24 @ South of Jacobson Drive (Lively)        | 64%                | 98%                   |
| B   | Walford Road @ Ramsey View Court               | 62%                | 90%                   |
| C   | Brady Street @ Shaughnessy Street              | 76%                | 90%                   |
| C   | Elm Street @ Transit Terminal / Rainbow Centre | 80%                | 92%                   |
| C   | Kathleen Street @ East of Burton Street        | 60%                | 70%                   |
| C   | Riverside Drive @ East of Cross Street         | 43%                | 49%                   |
| C   | Southview Drive @ Stephen Street               | 44%                | 79%                   |
| C   | Bouchard Street @ Marcel Street                | 63%                | 88%                   |
| C   | York Street @ Hillsdale Crescent               | 72%                | 50%                   |

### PXO Type D Compliance

Type D crossing consists of regulatory and warning signs, and pavement markings prescribed by Ontario Regulation 615 as illustrated in the layout below. The system uses only side mounted regulatory signs and does not require flashing beacons. This type of PXO is designed for medium to low volume, low speed, single lane roadway, such as collector, single lane roundabouts and right turn channelized.

The 2018 Pedestrian Crossover Program Update showed lower vehicle compliance at Type D crossings. In an effort to improve compliance at

Type D PXOs, staff trialed a new flexible bollard as shown in the picture below.



The bollard is set up in the middle of the street to increase the visibility of the crossover and to remind motorists to yield to pedestrians. Staff compared the compliance at all Type D locations before and after the installation of the bollards to see if they were effective. The table below shows the results for each location.

**Table 2. Type D Locations Monitored for Motorist Compliance in 2018/2019**

| Type D Pedestrian Crossing Locations – Vehicle Compliance |                                   |                         |                         |
|---|-----------------------------------|-------------------------|-------------------------|
| Type  | Location                          | Vehicle Compliance 2018 | Vehicle Compliance 2019 |
| D   | Elgin Street @ Nelson Street      | 30%                     | 22%                     |
| D   | Elgin Street @ Shaughnessy Street | 48%                     | 51%                     |
| D   | Bond Street @ Murray Street       | 38%                     | 54%                     |
| D   | Madison Avenue @ Sagebrush Place  | N/A                     | 30%                     |
| D   | Algonquin Road @ Tuscan Trail     | N/A                     | 39%                     |

Due to the low vehicle compliance at a number of PXO locations, staff conducted a more detailed review of driver behavior at Type B, C and D

locations. The data shows the majority of vehicle non-compliance occurs when a pedestrian is standing on the tactile warning panel waiting to cross.

| <b>Pedestrian Crossing Locations With Low Vehicle Compliance</b> |  |                                 |
|--|--|---------------------------------|
| Location   | Pedestrians waiting on tactile warning panel * | Pedestrians crossing the road * |
| Elgin Street @ Nelson Street                                     | 94% (30)                                       | 6% (2)                          |
| Elgin Street @ Shaughnessy Street                                | 60% (17)                                       | 40% (11)                        |
| Bond Street @ Murray Street                                      | 50% (1)  | 50% (1)                         |
| Madison Avenue @ Sagebrush Place                                 | 57% (4)  | 43% (3)                         |
| Algonquin Road @ Tuscan Trail                                    | 90% (9)  | 10% (1)                         |
| Southview Drive @ Stephen Street                                 | 90% (27)                                       | 10% (3)                         |
| Riverside Drive @ Armoury Trail                                  | 88% (7)  | 12% (1)                         |

\* Number of pedestrians in parentheses.

## **Pedestrian Collisions**

During the past year, the first two collisions involving a pedestrian at a pedestrian crossover occurred. One occurred on Elm Street near the transit depot and the other occurred on Brady Street at Shaughnessy Street.

On Brady Street, the pedestrian who was struck had waited for the curb lane of traffic to stop before starting to cross. As they crossed into the inside lane a vehicle failed to yield and struck the pedestrian. The pedestrian suffered injuries from the collision.

On Elm Street, the pedestrian was struck while crossing the inside lane by a vehicle travelling eastbound that failed to yield.

All collisions involving pedestrians are concerning to staff. Staff will continue to monitor the safety of pedestrians at all PXOs and explore various countermeasures as appropriate.

## **Education Strategy**

Based on the reported collisions and the results of the compliance studies, staff have begun working with Corporate Communications and Greater Sudbury

Police Services to create an education strategy to be released in the fall of 2019. The strategy will focus on reinforcing the rules for pedestrian crossovers.

## 2020 Pedestrian Crossover Locations:

In 2019, staff received one request for a pedestrian crossovers to be installed throughout the community. Staff proceeded to complete the warrant process for these requested crossings to determine whether they met the guidelines outlined in Book 15 of the Ontario Traffic Manual. Analysis concluded that the one the requested PXO is warranted and staff recommend implementation of the PXO at the following location in 2020:

**Table 2: Pedestrian Crossings which Qualify for a Pedestrian Crossover**

| Intersection                           | Pedestrian Volume | Vehicular Volume | Raised Refuge | Number of Lanes | Type |
|--|-------------------|------------------|---------------|-----------------|------|
| Van Horne Street at Shaughnessy Street | 509               | 3277             | No            | 3               | B    |

## New PXO Requests:

Requests for pedestrian crossings received since implementation of the initial program launch continue to be reviewed by staff on an ongoing basis. Staff regularly conduct sight line analyses and complete traffic counts to determine if PXOs are warranted at any of the requested locations. Staff will continue to bring forward an annual update report which will outline any additional warranted pedestrian crossovers.

## Next Steps:

Staff will continue to work with Corporate Communications and Greater Sudbury Police Services to develop public communication materials to inform drivers and pedestrians of new locations for the pedestrian crossovers.

It was also brought to staff's attention that playgrounds that have been identified in the Playground Revitalization Report (<http://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&id=1155&itemid=13213&lang=en>) should be reviewed after the revitalization work has been completed due to the expected increased volume of pedestrians who will be trying to walk to these facilities. Staff will work with Leisure Services to see if any increase in use of revitalizing parks results in a warranted pedestrian crossover.