

2018 Pedestrian Crossover Program Update

In May 2016, a report entitled "[Pedestrian Crossover Facilities](#)" was presented to Operations Committee providing an overview of this new tool and recommending 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 July 2017, the first 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. The 2018 update is also being presented at this time, so that potential new pedestrian crossover locations that were evaluated over the summer of 2017 can be approved and installed in 2018.

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. In July 2017, the [first annual report](#) was presented to Operations Committee highlighting findings from studies of three PXOs, including Brady Street at Shaughnessy Street, Barry Downe Road at Woodbine Avenue and Elm Street at the Transit Terminal.

To determine additional impacts that the PXO program has had, studies of both pedestrians and motorists were completed at some of the previously-installed locations as identified in Table 1.

Table 1. Locations and Types of Pedestrian Crossovers Monitored for Pedestrian and Motorist Compliance in 2017

Location	PXO Type
Bond Street, 25 m East of Murray Street	D
Elgin Street and Nelson Street	D
Elgin Street and Shaughnessy Street	D
LaSalle Boulevard and Barry Downe Road, Eastbound Right Turn Lane	D Channelized
LaSalle Boulevard and Barry Downe Road, Northbound Right Turn Lane	D Channelized
Municipal Road 24, 30 m South of Jacobson Drive	B

Analysis presented within this report is based on observations and data collected from these six pedestrian crossovers.

Motorist Compliance:

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.

Motorist compliance for the PXOs observed as part of this report was variable (Figure 1). It is possible that the type of PXO installed at a crossing has an impact on motorist compliance, with Type D PXOs exhibiting lower than expected compliance at present. Type D PXOs are designed with 'Stop for Pedestrians' signs on both sides of the ladder crosswalk markings and also have yield bars to indicate where vehicles and bicycles must stop. Type C and Type B PXOs both have flashing beacons to supplement the signage and pavement markings which may potentially have an impact on motorist compliance.

The Bond Street crossing as well as the Elgin Street crossings at Nelson Street and at Shaughnessy Street, appear to have low motorist compliance, however a closer look at the data suggests this may be the result of the low volume of potential conflicts between pedestrians and motorists observed during the study. The vast majority of pedestrians approaching the PXOs were able to make a safe crossing without any conflicts with motor vehicles. Similarly the majority of vehicles travelling in these two corridors were able to go through the PXO without a pedestrian present. In the instances where there was a pedestrian waiting to cross at the PXO, the approaching vehicles did not typically stop.

Motorist compliance was near perfect at the two Type D channelized PXOs at the intersection of Barry Downe Road and LaSalle Boulevard that were monitored as part of this study. Compliance levels are believed to be high due to the fact that motorists are already beginning to slow down on an approach to a channelized turn.

The Type B PXO installed on Main Street in Lively has witnessed relatively high motorist compliance. Again, this type of PXO is installed with flashing beacons, which signal more strongly to motorists that stopping for a pedestrian waiting to cross the road is required.

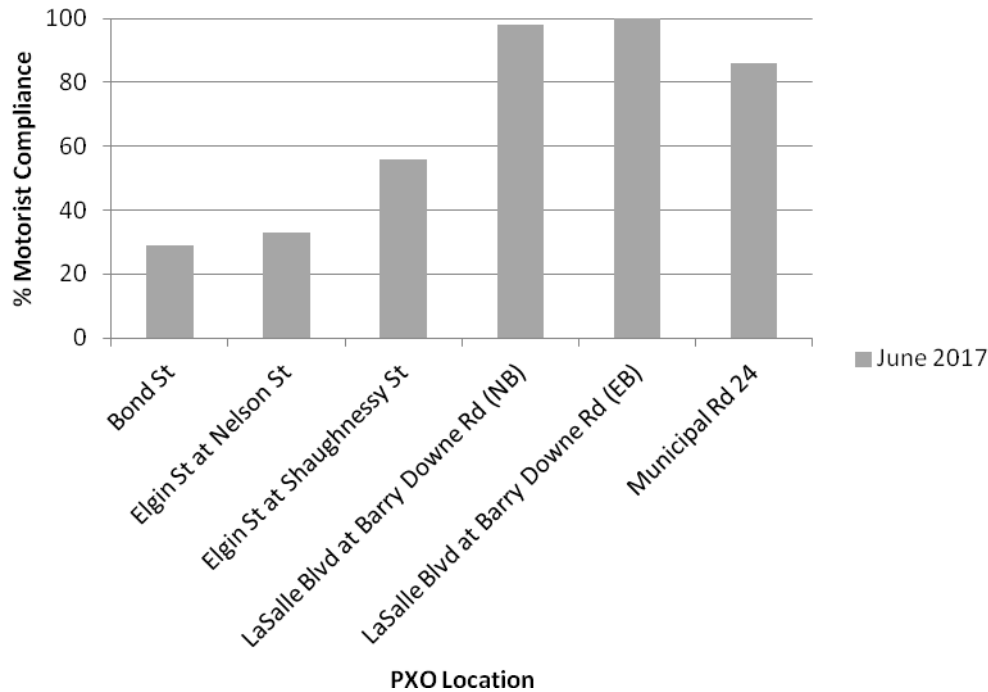


Figure 1. Percentage of motorists at each PXO Location who stopped at the appropriate time to allow pedestrians to cross the road

Pedestrian Compliance and Use:

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.

Table 2 illustrates pedestrian compliance for the six crossings that were studied. Pedestrians were considered to be in compliance if they waited for the vehicles to stop prior to entering the roadway and if they remained within the ladder crosswalk markings for the entirety of their crossing. The percentages represent the proportion of pedestrians who followed these rules out of the ones who could have followed these rules.

Although it has been less than a year since the initial installation of PXOs, it is important to note that no pedestrian collisions have been reported within any of the installed pedestrian crossovers.

Table 2: Locations and Types of Pedestrian Crossovers Monitored for Pedestrian and Motorist Compliance in 2017

Location	Percent Pedestrian Compliance (%)	PXO Type
Bond Street, 25 m East of Murray Street	100	D
Elgin Street and Nelson Street	66	D
Elgin Street and Shaughnessy Street	70	D
LaSalle Boulevard and Barry Downe Road, Eastbound Right Turn Lane	98	D Channelized
LaSalle Boulevard and Barry Downe Road, Northbound Right Turn Lane	100	D Channelized
Municipal Road 24, 30 m South of Jacobson Drive	84	B

Pedestrian Volumes:

While volumes have changed since the initial traffic counts conducted in May 2016, the results are inconclusive (Table 3). Staff will continue to monitor pedestrian volumes to determine if there are trends over the longer term, and will report back in future years on any findings.

Table 3: 2016 and 2017, 8-hr Pedestrian Volume Count Results

Location	May 2016 Pedestrian Volume (8-hr)	June 2017 Pedestrian Volume (8-hr)	% Change
Bond Street, 25 m East of Murray Street	105	106	0%
Elgin Street and Nelson Street	117	156	33%
Elgin Street and Shaughnessy Street	186	118	-37%
LaSalle Boulevard and Barry Downe Road, Eastbound Right Turn Lane	183	260	42%
LaSalle Boulevard and Barry Downe Road, Northbound Right Turn Lane	137	123	-10%
Municipal Road 24, 30 m South of Jacobson Drive	32	22	-31%

2018 Pedestrian Crossover Locations:

In 2017, staff received 22 requests for 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 four (4) of the requested PXOs are warranted and staff recommend implementation of PXOs at the following locations in 2018:

Algonquin Road at Tuscany Trail

A community meeting was held in the area of Algonquin Road in early 2017, where residents expressed concern regarding traffic speeds and safe crossings of Algonquin Road in the vicinity of Algonquin Public School. A Type D PXO is recommended to be installed on Algonquin Road at Tuscany Trail, to enable pedestrians to cross Algonquin Road at a controlled location other than at the intersection of Algonquin Road and Countryside Drive.

Walford Road at Ramsey View Court

There are two schools in the vicinity of the intersection of Walford Road at Ramsey View Court. During the before and after school hours, a crossing guard is present to ensure vehicular traffic stops to provide safe crossing opportunities for the students and other pedestrians in the area. As part of the study of this intersection, it was determined that a sufficient number of crossings take place outside of the hours when the crossing guard is present, therefore it is recommended that a Type B PXO be installed at this intersection.

Westmount Avenue at William Street

A Type B PXO is warranted to facilitate mid-block crossings of Westmount Avenue at William Street. With a densely populated residential area and retirement residence situated to the north of Westmount Avenue and with commercial establishments located to the south, pedestrians are frequently crossing mid-block. Traffic counts conducted for the PXO warrant determined that the majority of pedestrians crossing in this area are seniors. Providing this controlled mid-block crossing will enable pedestrians to take the shortest route to their destinations, thereby further encouraging more active travel in the neighbourhood.

York Street at York Street Playground

In 2017, staff received a number of requests from residents in the vicinity of the York Street Playground to investigate an opportunity to provide a controlled mid-block crossing of York Street. Staff completed traffic counts and sightline analysis and have concluded that a PXO Type D crossing is warranted and can be safely installed. The PXO will enable pedestrians south of York Street to access the York Street Playground and will provide residents to the north with access to the sidewalk on the south side of York Street.

Table 2: Pedestrian Crossings which Qualify for a Pedestrian Crossover

Intersection	Pedestrian Volume	Vehicular Volume	Raised Refuge	Number of Lanes	Type
Algonquin Road at Tuscan Trail	157	2448	No	2	D
Walford Road at Ramsey View Court	207	5445	No	3	B
Westmount Avenue at William Street	146	3988	No	3	B
York Street at York Street Playground	103	3680	No	2	D

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:

The addition of PXOs to the municipal infrastructure toolbox has provided a lower cost option to create controlled pedestrian crossings at locations where pedestrians desire to cross. By continuing to expand the PXO program, pedestrian access and movement will continue to be prioritized which ultimately enhances pedestrian safety and enables a healthier lifestyle for Greater Sudbury residents.

In an effort to improve compliance at Type D PXOs, staff are collaborating with other municipalities to exchange compliance data, efforts and ideas for additional measures and education opportunities to be explored. In 2018, staff will investigate further opportunities to receive feedback from both motorists and pedestrians on their experiences with PXOs, which may include an online survey of the public.

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 and to continue to educate all road users on their proper use.

Resources Cited:

Ontario Traffic Manual, *Book 15 Pedestrian Crossing Facilities*, 2016