

Pedestrian Crossing Protection - Beran Drive and Palacky Street

Date: January 3, 2023

To: Scarborough Community Council

From: Director, Traffic Management, Transportation Services

Wards: Ward 24, Scarborough-Guildwood

SUMMARY

This staff report is about a matter that Community Council has delegated authority from City Council to make a final decision.

Transportation Services has reviewed the need for pedestrian crossing protection at the intersection of Beran Drive and Palacky Street. Based on the assessment undertaken, Transportation Services is recommending the installation of an all-way stop control (AWSC) to enhance safety for vulnerable road users crossing at this intersection, which directly accesses a park and an elementary school.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. Scarborough Community Council authorize all-way compulsory stop control at the intersection of Beran Drive and Palacky Street.

FINANCIAL IMPACT

The estimated costs associated with the proposed amendment is \$9,000.00. Funding is anticipated to be available within the Transportation Services 2024 Interim Operating and Capital Budgets.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

Transportation Services staff was requested by the Ward Councillor, on behalf of area residents, to review the need for pedestrian crossing protection at the intersection of Beran Drive and Palacky Street. This request is to address concerns for crossing safety for pedestrians accessing Cornell Park Trail, Cornell Park and Cornell Junior Public School, located north of the intersection.

Existing Conditions

Beran Drive is characterized by the following conditions:

- It is a two-lane, east-west, local roadway
- It operates two-way traffic on a pavement width of approximately 8.5 metres
- The daily two-way traffic volume is approximately 200 vehicles
- The speed limit will be reduced to 30 km/h from 50 km/h in the future, as per SC32.11 - Vision Zero Road Safety Plan Speed Limit Reductions to 30 kilometres per hour on Local Roads and Public Lanes - Scarborough Area (Ward 20 and Ward 24)
- Heavy trucks are prohibited at all times
- There is no TTC service provided
- There are sidewalks located on both sides of the street

Palacky Street is characterized by the following conditions:

- It is a two-lane, north-south, local roadway
- It operates two-way traffic on a pavement width of approximately 8.5 metres
- The daily two-way traffic volume is approximately 150 vehicles
- The speed limit will be reduced to 30 km/h from 50 km/h in the future, as per SC32.11 - Vision Zero Road Safety Plan Speed Limit Reductions to 30 kilometres per hour on Local Roads and Public Lanes - Scarborough Area (Ward 20 and Ward 24)
- Heavy trucks are prohibited at all times
- There is no TTC service provided
- There are sidewalks located on both sides of the street

The intersection of Beran Drive at Palacky Street is a "T" type intersection, with Palacky Street connecting to the south side of Beran Drive only. Currently, east-west traffic on Beran Drive is free-flow and northbound traffic on Palacky Street is stop-controlled.

The adjacent land use in this area is predominantly single family residential, with Cornell Park Trail located on the north side of the intersection, accessing Cornell Park and Cornell Junior Public School.

A map of the area is shown in Attachment 2.

Transportation Services has reviewed the need for either a pedestrian crossover (PXO) or all-way stop control (AWSC) at this location to determine if either device should be recommended as an appropriate pedestrian crossing protection.

Pedestrian Crossover (PXO)

To determine the need for pedestrian crossing protection at Beran Drive and Palacky Street, 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. Based on the traffic volume on Beran Drive, the warrants require a minimum of 200 pedestrians crossing over eight hours. Also, based on the pedestrian crossing volume, at least 130 pedestrians must be delayed more than 10 seconds.

An eight-hour pedestrian volume and delay study was conducted on June 21, 2023, which recorded the total volume and delays of pedestrians crossing Beran Drive at Palacky Street. Seniors, unassisted children and people with disabilities that are observed crossing are given a higher weighting by a factor of two. The adjusted volume of pedestrians observed crossing was 195; of these, none experienced a delay greater than 10 seconds. 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 at Beran Drive and Palacky Street

Justification	Compliance
Pedestrian Volume	98 percent
Pedestrian Delay	0 percent

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 both the pedestrian volume and delays have not met the minimum requirements.

Staff also reviewed the collision history at this location. Collision statistics provided by the Toronto Police Service for the three-year period ending November 30, 2023, disclosed zero collisions at the area of Beran Drive and Palacky Street that involved crossing pedestrians.

Environmental safety characteristics were also evaluated to determine if the installation of a PXO would be appropriate at this location. Details of the evaluation are included in Attachment 1. Based on the evaluation, a potential PXO could be a less suitable type of pedestrian crossing protection at this location due to the presence of nearby driveways. In view of this, and the numeric warrants not being met, all-way stop controls (AWSC) were investigated.

All-way Stop Control (AWSC)

In order for AWSC to be warranted at an intersection, established criteria must be satisfied. The warrants consist of four components, including collision history, total vehicle volume, combined vehicle and pedestrian volumes crossing the major road and the percentage of traffic on the major road.

Collision history provided by the Toronto Police Service for the three-year period ending November 30, 2023, disclosed that zero reported collisions occurred at this intersection and as noted above, none of these collisions involved pedestrians.

Transportation Services conducted an AWSC study on November 23, 2022, at the subject intersection. The results of the study were evaluated against the warrant criteria for all-way stop control as adopted by City Council. The evaluation is summarized in Table 1.

Table 2: All-Way Stop Control Study at Beran Drive and Palacky Street

No.	Warrant Type	Actual	Required	Satisfied (Yes/No)
A	Number of Potentially Preventable Collisions (Dec 1, 2020, to November 30, 2023)	0	6	No
B1	Average Vehicle Volumes	37/hour	250/hour	No
B2	Combined Vehicle & Pedestrian Volumes Crossing Major Road (Average)	32/hour	100/hour	No
B3	Percentage of Traffic on Major Street	47%	≤70%	Yes

Based on the study results it was determined that this intersection does not meet the numerical requirements for the installation of AWSC.

In addition to the technical criteria, consideration of the surrounding area is given and in some cases engineering judgment may be applied to recommend pedestrian crossing protection even if the number of pedestrians do not meet the threshold of the technical warrants. Due to the existing desire lines and direct proximity to vulnerable road user generators, Transportation Services can support the installation of pedestrian crossing protection at Beran Drive and Palacky Street.

An AWSC is considered the most appropriate intervention based on its ability to provide crossing protection and provide context specific vulnerable road user benefits, including crossings on all approaches and more stringent requirements for vehicles to stop. Therefore, the installation of an AWSC at the intersection of Beran Drive and Palacky Street is recommended.

Other Considerations

It should also be noted that the installation of an AWSC at Beran Drive and Palacky Street will result in the loss of approximately two on-street parking spaces on Beran Drive.

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

CONTACT

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

SIGNATURE

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

ATTACHMENTS

Attachment 1: Environmental Safety Audit - PXO - Beran Drive and Palacky Street
Attachment 2: Map - All-Way Stop Control - Beran Drive and Palacky Street

Attachment 1: Environmental Safety Audit - PXO – Beran Drive and Palacky Street

Standard	Comments	Standard Met/Not Met
Vehicle operating speed less than 60 km/h	The posted speed limit on Beran Dr is 50 km/h or 30 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	Beran Dr has a two lane cross section at Palacky St.	Met
Traffic volume not more than 35,000 vehicles per day	Beran Dr carries approximately 200 vehicles per day.	Met
No significant volume of turning movements	The volume of traffic turning to/from Beran Dr is low (approx. 34 vehicles over busiest eight hours).	Met
No visibility problems exist for either pedestrians or motorists	There are no visibility concerns along this segment of Beran Dr	Met
No loading zones (including TTC) in the immediate area	There are no loading zone within the immediate area	Met
No driveways or entrances nearby	Driveway on present along the north side of Beran Dr and at the south-west corner of the intersections	Not Met
Spacing is not less than 200 metres to another pedestrian crossover or traffic control signal	There is a stop-controlled crossing within 200 metres of the segment	Met

Attachment 2: Map - All-Way Stop Control - Beran Drive and Palacky Street

