

Attachment 8 - New Traffic Control Signal - Alton Towers Neighbourhood Connections (Ward 23)



Figure 8-1: Alton Towers Neighbourhood Connections Overview Map

Traffic Control Signal Justification - Brimley Road and a Point 180 metres North of Wenlock Gate

Existing Conditions

Brimley Road is characterized by the following conditions:

- It is a four-lane, north-south, major arterial roadway
- It operates two-way traffic on a pavement width of approximately 14.0 metres
- The daily two-way traffic volume is approximately 19,000 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is TTC service provided by the 21 bus route
- There are sidewalks located on both sides of the street

Northbound and southbound traffic along Brimley Road is free flow. There is no connecting side street at Brimley Road and a point 180 metres north of Wenlock Gate.

Staff reviewed the collision history at this location. Collision statistics provided by the Toronto Police Service for the three-year (3-year) period ending April 27, 2026, indicate that no collisions occurred on Brimley Road between Wenlock Gate and Eagledance Drive.

The adjacent land use in this area is low-density residential. Multi-use paths on both the east and west sides of the Brimley Road provide connections to residential areas,

parcs, and schools via Audrelane Court and Lorna Rae Boulevard on the west side of Brimley Road and Oakhaven Drive on the east side. There are existing TTC transit stops at this location served by the 21 bus route.

The closest adjacent traffic control signals are located approximately 185 metres to the south at Wenlock Gate/Port Royal Trail and approximately 245 metres to the north at Eagledance Drive/Port Royal Trail.

In accordance with the Council-adopted Pedestrian Crossing Protection Device Justification Policy, Transportation Services has reviewed the need for a pedestrian crossing protection device (a Pedestrian Crossover - PXO - or traffic control signal).

Pedestrian Crossing Protection Device Justification

To determine the need for a new pedestrian crossing protection device at Brimley Road and a point 180 metres north of Wenlock Gate, staff rely on the justification criteria as outlined in the Pedestrian Crossing Protection Device Justification Policy. The justification criteria includes two (2) main factors: the volume of vehicles and pedestrians; and pedestrian delay to cross traffic measured over an eight-hour (8-hour) period with the highest recorded number of pedestrians. Staff may also consider four- and two-hour (4- and 2-hour) analysis periods. For a new crossing to be technically justified, the Pedestrian Volume and Delay justification must be fulfilled for one (1) of the three (3) time periods. In addition to the technical justification, staff review additional considerations such as the collision history and distance to the nearest controlled crossing opportunity.

An eight-hour (8-hour) pedestrian volume and delay study was conducted on October 4, 2025, which recorded the total volume and delays of pedestrians crossing at the location on Brimley Road at a point 180 metres north of Wenlock Gate. Seniors, unassisted children, and people with disabilities that are observed crossing are given a higher weighting by a factor of two (2). Table 8-1 shows the results of the pedestrian volume and delay study.

Table 8-1: Pedestrian Volume and Delay at Brimley Road and 180 metres North of Wenlock Gate

Time Period	Criteria	Minimum Required	Recorded Volume	Justification Met? (Yes/No)
8 Hours (School Hours – 7:30 AM to 6:00 PM)	Net Volume of Total Pedestrians	150	71	No
	Net Volume of Delayed Pedestrians	N/A	38	
4 Hours (8:30 to 9:30 AM, 10:00 to 11:00 AM)	Net Volume of Total Pedestrians	100	46	No

Time Period	Criteria	Minimum Required	Recorded Volume	Justification Met? (Yes/No)
11:00 AM, 12:00 to 1:30 PM, and 2:30 to 3:00 PM)	Net Volume of Delayed Pedestrians	N/A	25	
2 Hours (10:00 to 11:00 AM and 12:00 to 1:00 PM)	Net Volume of Total Pedestrians	65	28	No
	Net Volume of Delayed Pedestrians	N/A	23	
Net 8-Hour Vehicular Volume on Street Being Crossed				7,000

Based on the results of the pedestrian volume and delay study, a new pedestrian crossing protection device is not technically justified.

In addition to the technical criteria, consideration of the collision history and distance to nearest controlled crossing opportunity is given for locations with a pronounced desire to cross based on the adjacent land use and transportation facilities. Based on these considerations, a pedestrian crossing protection device may be recommended even though the numerical justification of Pedestrian Volume and Delay is not met.

Contextual Consideration / Environmental Audit on Brimley Road at a Point 180 metres North of Wenlock Gate

Notwithstanding the numeric warrants not being met, in view of the potential safety and connectivity concerns in the subject section of Brimley Road, Transportation Services further considered the installation of traffic control signals at Brimley Road and a point 180 metres north of Wenlock Gate, based on the following environmental factors:

- The spacing between pedestrian crossing protection on Brimley Road, between Wenlock Gate and Eagledance Drive, is approximately 433 metres.
- The four-lane (4-lane) cross-section on Brimley Road, as well as the speed and volume of traffic using this street.
- Pedestrian desire lines across Brimley Road, connecting to residential areas, Goldhawk and Audrelane Parks, schools, places of worship, and libraries on both the east and west sides of the street. Multi-use pathways provide connections from Brimley Road to Audrelane Court and Lorna Rae Boulevard on the west side and to Oakhaven Drive on the east side.
- The presence of transit stops in both directions on Brimley Road attract pedestrians to cross the street.
- TTC staff’s current intentions to retain these transit stops due to the catchment they serve extending deep into the surrounding neighbourhoods and the intent to serve the transit stops by a protected crossing and an accessible pedestrian network.

- Connection to a proposed cycling facility, as there are proposed cycling routes along Audrelane Court west of Brimley Road and Oakhaven Drive east of Brimley Road. These routes are connected to Brimley Road through existing multi-use pathways and would require connection across Brimley Road through a protected crossing. The cycling routes on Audrelane Court and Oakhaven Drive were identified in the Cycling Network Plan's 2025-2027 Near-Term Implementation Program and are currently in design and consultation phase, as part of The Alton Towers Neighbourhood Connections project.

In considering the above environmental factors, Transportation Services recommends the installation of a new pedestrian crossing protection device on Brimley Road at a point 180 metres north of Wenlock Gate, as it would provide enhanced safety for all road users.

Based on the number of lanes to cross, vehicular traffic volume, and posted speed limit, the minimum acceptable level of traffic control at Brimley Road at a point 180 metres north of Wenlock Gate is a traffic control signal. As such, Transportation Services recommends that a traffic control signal be installed on Brimley Road at a point 180 metres north of Wenlock Gate. Because there are no side streets at this location, a Mid-Block Pedestrian Signal (MPS) will be installed.

The minimum acceptable level of control was evaluated to determine if a PXO would be appropriate at this location. While there are considerations for posted speed limit and annual average daily traffic, a PXO is not a suitable type of pedestrian crossing protection when there are four (4) lanes to cross, regardless of the motor vehicle traffic volumes and speeds.

Consultation with TTC

The TTC has been consulted and concurs with these findings. TTC does not currently have plans to remove or relocate these stops, as the catchment they serve extends deep into the surrounding neighbourhoods.

Other Considerations

It should also be noted that the installation of a traffic control signal may result in the following impacts:

- There is potential for increase in delays to transit service on Brimley Road. However, the signal will only be activated by crossing pedestrians or people cycling.
- There is potential for impacts (injury and/or removal) to approximately four (4) trees to due to shifting transit stops to meet required clearances to the crossing.

There would be no impact to parking on Brimley Road associated with the installation of traffic control signals at this intersection.