

Corridor Safety Review - Mortimer Avenue, between Pape Avenue and Broadview Avenue

Date: March 14, 2024

To: Toronto and East York Community Council

From: Director, Traffic Management, Transportation Services

Wards: Ward 14, Toronto-Danforth

SUMMARY

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

Toronto and East York Community Council directed Transportation Services to conduct a review of various safety and operational concerns for road users on Mortimer Avenue, between Pape Avenue and Broadview Avenue. This report provides an overview of the assessments and improvements proposed or undertaken by Transportation Services.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. City Council receive this report for information.

FINANCIAL IMPACT

All costs associated with the safety and operational improvements are included in the Transportation Services 2024 Operating Budget.

DECISION HISTORY

On September 19, 2023, Toronto and East York Community Council adopted Item TE7.80 (Mortimer Avenue Traffic Safety - Pape to Broadview), directing Transportation Services to review the list of traffic safety suggestions from residents on Mortimer Avenue and report back with recommendations to improve traffic and pedestrian safety on Mortimer Avenue, between Broadview Avenue and Pape Avenue. The Community Council decision can be found at:

<https://secure.toronto.ca/council/agenda-item.do?item=2023.TE7.80>

COMMENTS

In response to the direction from Toronto and East York Community Council's adoption of the item TE7.80, Transportation Services reviewed the list of traffic safety suggestions from the residents on Mortimer Avenue and evaluated the operational and safety measures along Mortimer Avenue, between Pape Avenue and Broadview Avenue.

Existing Conditions

Mortimer Avenue is characterized by the following conditions:

- It is a two-lane, east-west, roadway that is classified as a minor arterial road
- It operates two-way traffic on a pavement width of approximately 8.4 metres
- The daily two-way traffic volume is approximately 12,000 vehicles
- The operating speed, the speed at which 85 percent of traffic is travelling at or below, was observed to be less than 46 km/h, as of October 2023
- The speed limit is 40 km/h
- Heavy trucks are prohibited at all times
- There is TTC service is provided by 62 Mortimer bus route
- There are sidewalks located on both sides of the street

The parking regulations on Mortimer Avenue, between Pape Avenue and Broadview Avenue, are as follows:

North side

- No parking, from 4:00 p.m. to 6:00 p.m., Monday to Friday
- No stopping, from 7:00 a.m. to 9:00 a.m., Monday to Friday
- Maximum three-hour statutory parking at all other times

South side

- No parking anytime
- No stopping, from 4:00 p.m. to 6:00 p.m., Monday to Friday

The adjacent land use along Mortimer Avenue, between Pape Avenue and Broadview Avenue, is generally comprised of single-family residential properties. Centennial College is located at the southeast corner of the intersection of Mortimer Avenue and Carlaw Avenue.

Road Classification

As noted, Mortimer Avenue is classified as a minor arterial road. The adjacent sections of Mortimer Road/Lumsden Avenue to the east, and Pottery Road to the west, are also classified as minor arterial roads.

A street network performs most efficiently and safely from both a traffic operations and a road safety perspective if roads are designated and operated to serve their intended purposes. As per the City of Toronto's Road Classification Guidelines, a road with a minor arterial classification is generally intended to function with the following characteristics:

- Traffic movement is a primary function
- Some property access control
- 8,000 to 20,000 vehicles per day
- 1,500 to 5,000 bus passenger per day
- Speed limits of 40 km/h to 60 km/h
- No stop signs; main intersections controlled by traffic signals
- No truck restrictions
- Sidewalks on both sides
- High priority of winter maintenance

Mortimer Avenue falls within these guidelines, with the exception of the heavy truck access.

Study Area & Controls

The study area consists of nine intersections, listed as follows (east to west) with their classification and control at Mortimer Avenue:

- Pape Avenue, a major arterial road, controlled by traffic control signals
- East York Avenue, a local road and a "T" type intersection, controlled by a stop sign on the side street
- Carlaw Avenue, a collector (south)/local (north) road, controlled by a pedestrian crossover (PXO) and a stop sign on the side street
- Dilworth Crescent, a local road and a "T" type intersection, controlled by a stop sign on the side street
- Logan Avenue, collector (south)/local (north) road, controlled by traffic control signals
- Arundel Avenue, a local road and a "T" type intersection, controlled by a stop sign on the side street

- Burley Avenue, a local road and a "T" type intersection, controlled by a stop sign on the side street
- Jackman Avenue, a local road and a "T" type intersection, controlled by a stop sign on the side street
- Broadview Avenue, a minor arterial road, controlled by traffic control signals

A map of the area is included in Attachment 1.

Collision Review

A review of the Toronto Police Service collision records, with specific emphasis for pedestrians, cyclists and Killed or Seriously Injured (KSI) collisions within the study area for the three-year period ending January 1, 2024 was undertaken and revealed one collision involving a pedestrian.

On September 19, 2023, a southbound left turning TTC vehicle at Broadview Avenue struck a pedestrian who fell into the road as they were walking eastbound on Mortimer Avenue. The pedestrian sustained major injuries.

Road Safety Review

Transportation Services staff assessed the traffic safety recommendations submitted by the residents on Mortimer Avenue and provided comments on the items on the list as they relate to their respective units. The results of this review are summarized below:

1. Automated Speed Enforcement:

Automated Speed Enforcement (ASE) is an automated system that uses a camera and a speed measurement device to detect and capture images of vehicles travelling in excess of the posted speed limit. Locations are selected through a data-driven approach that considers vehicle speed and collision data. ASE systems are placed in Community Safety Zones. Mortimer Avenue, between Pape Avenue and Broadview Avenue, is not designated as a Community Safety Zone; therefore, it would not be eligible for ASE. Should this area be designated as a Community Safety Zone, it would need to be evaluated and prioritized against other Community Safety Zones within the ward.

2. Red Light Cameras:

A Red Light Camera (RLC) is an automated system that detects and captures images of vehicles entering an intersection despite the traffic signal indicating red. Similar to ASE, locations are selected through a data-driven approach that considers the collision history at all signalized intersections in the City, and a manual review of the sites to ensure all technical, operational and regulatory requirements are met. Based on the analysis, the intersections of Mortimer Avenue and Broadview Avenue/Pottery Road and Mortimer Avenue and Logan Avenue did not meet the warrant criteria for the installation of red-light cameras.

3. Speed limit reduction, yellow centreline, and in-road flexible speed signs:

Transportation Services, in consultation with TTC, has determined that given the road classification and presence of TTC services on Mortimer Avenue a speed limit reduction from 40 km/h to 30 km/h is not feasible.

A yellow centerline on a road indicates the separation between traffic moving in opposite directions, helping drivers stay in their lanes and facilitating safe passing when permitted. The installation of a centreline on narrower roads are not feasible due to width constraints, as there is not sufficient room to maintain a clear separation between opposing lanes. Mortimer Avenue is approximately 8.4 metres wide where parking is permitted on the north side, outside of peak hours, for a maximum period of three hours. Given the road width, presence of TTC services and the existing parking regulations; the requirements outlined in the City of Toronto's Lane Width Guidelines are not met. Therefore, the installation of a yellow centreline along the entire stretch of Mortimer Avenue, between Pape Avenue and Broadview Avenue, is not recommended.

The in-road flexible speed signs are installed in the centre of the road and serve as a visual reminder of the speed limit and a physical device, that can have a narrowing effect, to encourage compliance with the posted speed limit in high-priority areas. Staff identify locations using a data-driven model that prioritizes midblock segments based on estimated safety risk as well as through the School Safety Zone program. Given the traffic data and collision history, the candidacy criteria for the installation of in-road flexible speed signs are not met within the study area.

4. Cycling Facilities:

The Cycling Network Plan has a rolling three-year near-term implementation program. This approach is flexible and adaptable to the realities of infrastructure planning and capital coordination. Transportation Services regularly reviews the capital implementation program and every three years brings forward new routes based on the cycling network near-term program prioritization framework. The framework includes the cycling service assessment illustrated in the long-term vision; strategic alignment with the state-of-good-repair road program, health and wellness analyses, road safety focus areas, and planning focus areas; and takes into account the feasibility, complexity, and delivery methods of proposed design options. The framework applies an equity lens, which is informed by stakeholder engagement, geographic distribution, and a neighbourhood cycling and equity index.

The current Near-Term Implementation Program was adopted for 2022-2024. The program proposes approximately 100 centreline kilometres of new bikeways, as well as upgrades to existing routes and studies for future implementation. Mortimer Avenue is not included in the 2022-2024 near-term implementation program.

5. Geometric Safety Improvements:

At the time that this report was prepared, there are no capital works planned for the next five years on Mortimer Avenue, between Pape Avenue and Broadview Avenue.

Consideration would be given through any planned capital work to bring the design of the intersections within the study area, up to current standards. Potential improvements could include curb radius/radii reductions, lane narrowing or realignment, etc.

6. Street Lighting Improvements:

Street lighting is the responsibility of Toronto Hydro. However, Transportation Services' review did note that there are standard streetlights provided along Mortimer Avenue, between Pape Avenue and Broadview Avenue. In addition, Transportation Services prioritizes road segments for illumination enhancements based on a data driven approach that considers potential mid-block crossing demands and nighttime collision data. The highest priority segments are then reviewed by Toronto Hydro for potential lighting upgrades. Based on the latest network level review, Mortimer Avenue was not identified as a high priority road segment for illumination enhancements.

7. Turn Prohibitions:

When considering turn prohibitions, staff need to investigate the volumes of traffic making these movements, as well as the potential safety concerns associated with it. The concerns could include poor sightlines, the intersection geometry or high volumes of opposing traffic or pedestrians. Staff consider collision records provided by the Toronto Police Service to determine if there is a pattern of collisions associated with a specific direction/movement, and if there is a pattern as to the time of day/day of week. Additionally, staff also need to consider where displaced traffic will go to if a movement is prohibited.

Arundel Avenue and Jackman Avenue both form T-type intersections with Mortimer Avenue. The traffic volumes for the most recent turning movement count at these intersections over the busiest eight-hour period of a typical weekday are summarized in Tables 1 and 2, below:

Table 1 - Mortimer Avenue and Arundel Avenue turning volumes (October 12, 2023)

Direction and Movement	A.M. Peak Hour	P.M. Peak Hour	Eight-hour Total
Westbound Left turns	49	68	361
Eastbound Right turns	20	47	229
Eastbound Through	245	459	2,724
East/West Pedestrians	10	3	42

Table 2 - Mortimer Avenue and Jackman Avenue turning volumes (October 12, 2023)

Direction and Movement	A.M. Peak Hour	P.M. Peak Hour	Eight-hour Total
Westbound Left turns	58	53	399
Eastbound Right turns	64	81	392
Eastbound Through	244	479	2,689
East/West Pedestrians	9	19	94

Transportation Services reviewed the Toronto Police Service collision records at these intersections for the three-year period ending December 1, 2023. The review disclosed one collision reported at the intersection of Mortimer Avenue and Jackman Avenue that involved a westbound left-turning vehicle.

Transportation Services investigated the feasibility of introducing westbound left turn prohibitions at the above intersections. However, the turning volumes and their proportion to collisions are relatively low and do not justify the implementation of turn prohibitions.

It should also be noted that if left-turn prohibitions are implemented, in addition to restricting property access to the residents destined to the neighbourhood and displacing them onto the adjacent local streets; the turning volumes would remain on Mortimer Avenue, which in turn exacerbates delays and queue lengths at the intersection of Mortimer Avenue and Broadview Avenue. As such, westbound left-turn prohibitions are not recommended at this intersection without extensive community consultation.

8. All-Way Stop Controls:

Staff investigated the feasibility of installing all-way stop controls at the intersections of Mortimer Avenue and Burley Avenue and Mortimer Avenue and Carlaw Avenue. Southbound traffic is controlled by stop signs, while traffic on Mortimer Avenue is free flow. There is a PXO on the west side of the intersection of Carlaw Avenue and Mortimer Avenue.

In order for all-way stop controls 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.

Transportation Services conducted all-way stop control studies on September 21 and October 12, 2023, at these intersections. 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 3.

Table 3 - All-Way Stop Control Study at Burley Avenue and Mortimer Avenue and Carlaw Avenue and Mortimer Avenue

No.	Warrant Type	Actual		Required	Satisfied (Yes/No)
		Burley Avenue	Carlaw Avenue		
A	Number of Potentially Preventable Collisions (January 1, 2021 to December 31, 2023)	0	6	12	No
B1	Average Vehicle Volumes	800/hour	840/hour	500/hour	Yes
B2	Combined Vehicle & Pedestrian Volumes Crossing Major Road (Average)	40/hour	135/hour	200/hour	No
B3	Percentage of Traffic on Major Street	95%	86%	≤70%	No

In order for the all-way stop control to be technically warranted, either Warrant A must be met or Warrant B1 or B2 combined with Warrant B3 must be achieved. Based on the study results, the technical warrants for the installation of all-way stop control are not satisfied. Therefore, it is not recommended that all-way stop control be installed at the intersection of Burley Avenue and Mortimer Avenue and Carlaw Avenue and Mortimer Avenue.

It should be noted that, all-way stop controls are primarily intended to regulate traffic flow and enhance intersection safety by assigning right-of-way to vehicles in a structured manner. While they may indirectly contribute to reducing speeding by necessitating stops, they are not specifically designed as a primary measure to curb speeding on streets. Additionally, unwarranted implementation of all-way stop controls can lead to driver frustration and, may even result in excessive speeding as drivers attempt to make up for lost time. Finally, as noted in the road classification section, stop signs are generally not installed on minor arterial roads, the preferred control would be either a PXO or traffic control signals.

9. Signal Timing Review:

The traffic control signals at the intersection of Mortimer Avenue and Logan Avenue operates with a semi-actuated pedestrian mode of control (SAP). With this type of operation, the signal remains green on the main street (Mortimer Avenue) until there is an actuation by either a pedestrian or vehicle on the side street (Logan Avenue). The side street will always serve the pedestrian walk phase, regardless of whether a pedestrian or vehicle call has been received.

10. Advance Left-turns:

Staff investigated the feasibility of adding left turn phases at all approaches at the intersection of Mortimer Avenue and Broadview Avenue. The northbound and eastbound left-turn green arrow feature that were only provided during the weekday afternoon peak periods from 3:00 p.m. to 7:00 p.m., Monday to Friday were extended to be in effect between 6:30 a.m. and 9:30 a.m. This feature is only activated if vehicles are detected in the left-turn lanes. It has been determined that southbound and westbound left turn phases are not warranted based on traffic volumes.

11. Community Safety Zone Designation:

A Community Safety Zone (CSZ) is a designated stretch of roadway where public safety is of special concern, recognized under Provincial legislation, marked with community safety zone signs, allowing the doubling of fines associated with speeding and, the use of an automated speed enforcement system. In order for a road segment to be selected for further evaluation for a CSZ, the subject segment should be adjacent to facilities that have increased vulnerable road users. The following criteria would qualify a CSZ candidate for further evaluation:

- School crossing guard locations at major and minor arterial roads
- Roads close to high concentrations of senior residents, like retirement facilities
- Roads with non-separated bike lanes
- Road segments adjacent to community centers
- Road segments near parks with high visitor volumes
- Locations near city-run community centres
- Locations near to hospitals

Since Mortimer Avenue, between Pape Avenue and Broadview Avenue, does not meet any of the above, a Community Safety Zone designation is not warranted.

12. Increased Police Enforcement:

This item does not fall within the purview of Transportation Services.

Conclusion

Based on the above reviews and findings, staff do not have any operational or safety concerns with the existing conditions on Mortimer Avenue, between Pape Avenue and Broadview Avenue.

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

CONTACT

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SIGNATURE

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ATTACHMENTS

Attachment 1: Map - Area Map - Mortimer Avenue, between Pape Avenue and Broadview Avenue

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