



## TOWN OF MILTON MEMO

**TO:** Mayor and Members of Council

**FROM:** Diana Jiona, Director of Infrastructure

**DATE:** April 5, 2023

**SUBJECT:** Update re: Council Motions  
**PXO Review**  
**Right Turn and Left Turn Lane Review**

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This memo provides Council an overview of staff's plan to respond to Council Motions brought forward for consideration at the February 6, 2023 council meeting, regarding "Pedestrian Cross Over (PXO) Review" and "Right Turn, Left Turn Lane Review".

### Pedestrian Cross Over (PXO) Review

The following outlines the steps staff will take to evaluate existing PXO's and bring forward a potential 2024 budget request to upgrade any existing PXO's that warrant an upgrade

- A comprehensive review of our existing Pedestrian Cross Overs has been completed to confirm there are 43 existing PXOs, with 7 of these currently lit with a flashing beacon;
- Of the 36 locations that are currently not lit, staff has determined, using current data available to date, that 2 of these locations meet the warrant for an upgrade (Scott Boulevard at Finney Terrace, and the Commercial Street Walkway) and will be put forward as a 2024 budget request; 3 additional low level PXO's are so far planned for 2023; (Knight Trail and Higgins Drive; Woodward Avenue and Galbraith Boulevard/Robarts Drive; and McLaughlin Avenue and Serafini Crescent);
- Of the remaining 34 locations, up to date traffic count data is available for 14 locations and those locations do not warrant an upgrade at this time;
- This leaves 20 PXO locations where 24-hour traffic count data is outdated and will need to be updated;

- It is currently anticipated that the 24 hour traffic counts for these 20 locations can start in late April (as the equipment cannot be deployed until the weather is conducive/snow is not an issue), and will take approximately 3 weeks to complete the data collection;
- Once the data is collected, staff will analyze and compare the highest 8-hour traffic volumes to the warrant threshold (4500 vehicles), to determine which locations warrant an upgrade;
- Once the analysis is complete, this will inform any related 2024 budget requests for future year PXO upgrades;
- Based on current pricing, it is anticipated that the cost to upgrade a PXO to a fully lit PXO is approximately \$15,000 per location.

**School Crossing Review:**

The following steps will be taken to address the motion to review all existing school crossing locations to determine which can be upgraded to a fully lit PXO and to inform an associated 2024 budget request:

- First, staff will work to complete the data collection for 10 existing crossings - this is essentially completing work that was identified in 2019 (ref report ENG-023-19), but was unable to be completed due to the impacts of the COVID-19 pandemic on school operations; this work is required to determine if the crossing guards are indeed still warranted at these locations. This requires 3 sets of data during the school year (Fall, Winter and Spring) - there have been 2 data collections completed to-date for these locations, with the Spring data anticipated for April this year; once this data is complete, it will be analysed to determine if a crossing guard is still warranted for these locations; these locations are as follows:

<b>Location</b>	<b>All Way Stop</b>	<b>Mid-Block</b>
Bennett Boulevard and Hutchison Avenue		X
Bennett Boulevard and Wickson Way		X
Bolingbrook Drive W/of Vickerman Way		X
Childs Drive and Clements Drive		X
Tupper Drive and Bussell Crescent		X
Wilson Avenue S/of Woodward Avenue		X
Clark Boulevard and Bennett Boulevard	X	
Laurier Avenue and Coxe Boulevard	X	
Thomas Street and Heslop Road	X	

Yates Drive and Holly Avenue	X	
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- Of these 10 locations, 6 are located at “mid block” - so if the crossing guard warrant is not met, these locations will be further analysed to see if the warrant for a PXO (low level or fully lit) is met. The remaining 4 are located at all way stops, and if the crossing guard warrant is no longer met, then a PXO would not be installed.
- It is important to note that PXO’s are intended to provide a protected crossing for pedestrians at mid-block locations, designated school crossings (in the absence of a crossing guard and without other forms of control such as traffic control signals, intersection pedestrian signals, pedestrian crossover, stop or yield signs) and, roundabouts. PXO’s are not intended to be used at traffic control signals, intersection pedestrian signals, stop or yield signs as these are already considered a controlled crossing. The Ontario Traffic Manual (OTM) Book 15 provides guidance for practitioners on this topic, which the Town endeavors to follow.
- To close out and report back on the work and analysis flowing from the 2019 report, it is anticipated that a report to Council will be presented in summer 2023; in terms of prioritizing locations, of those locations that would warrant a PXO, but not a crossing guard, staff will prioritize based on traffic volumes (i.e. the higher volume = higher priority);
- In addition to the 6 mid-block school crossings identified above, there are 2 other existing mid-block school crossings (with crossing guards currently warranted and in place); the details of these are as follows:

Location	Details
Savoline Boulevard and Merkley Gate - located at trail connection to Optimist Park	Traffic counts will be completed and analyzed to determine if a PXO is warranted; note - if a fully lit PXO is warranted, the recommendation would be to replace the crossing guard with a fully lit PXO;
Sauve Street at south end of Irma Coulson Public School;	Crossing location to be shifted to the south to line up with trail into the school property; this location is not considered a suitable candidate for a fully lit PXO, as this is a school crossing only (trail only goes to school, is not part of the larger trail network); however, as requested by Council, the location can be counted and analyzed to see if the warrants for a fully lit PXO are met; however as with the above-noted location, the recommendation would be to replace the crossing guard with a fully lit PXO if that is the case;

- In addition to the locations above there are currently 7 mid-block school crossings that have both a low level PXO and a crossing guard installed, as follows:

Location	Details
Yates Drive and Symons Crossing	As crossing guards AND low level PXOs are installed; these locations will be reviewed as part of the PXO review, to determine if a fully lit PXO is warranted; if a fully lit PXO is warranted, the recommendation would be to remove the school crossing guards from these locations and replace with a fully lit PXO
Woodward Avenue and Joyce Boulevard	
Scott Boulevard and Athlone Drive	
Yates Drive and Lott Crescent	
745 Farmstead Drive (pathway at Anne J McArthur Public School)	
Tupper Drive and Pathway at St Anthony of Padua Elementary School	
Scott Boulevard and Finney Terrace	

- It is important to note that the warrant for a crossing guard is quite different than the warrant for a PXO; the warrant for crossing guards (mid-block) is based on the number of safe gaps available for pedestrians to cross, whereas PXO warrants are based on both pedestrian and vehicular volumes (and are not just limited to school entry and exit times);
- As noted above, PXO's are intended to provide a protected crossing for pedestrians at mid-block locations, designated school crossings (in the absence of a crossing guard and without other forms of control such as traffic control signals, intersection pedestrian signals, pedestrian crossover, stop or yield signs) and, roundabouts. Therefore, locations where school crossing guards are currently in place at all way stops or signalized intersections will not be reviewed for PXO installation/warrant.
- At this point it is anticipated that the cost to install a fully lit PXO at a school crossing where there is not currently a PXO installed is approximately \$20,000 per location; (it should be noted that if a fully lit PXO is warranted, the intent would be that the crossing guard would be removed from this location);

It is currently anticipated that both the PXO review and the School Crossing review can be completed in time to inform a 2024 budget request for any identified updates that would be required based on data collection and subsequent analysis.

**Right and Left Turn Review at Local and Regional Arterial Intersections:**

To complete a comprehensive review of the arterial intersections in Town, the following steps will be taken; ultimately, at this point, it is anticipated that due to the work involved this will likely inform a 2025 budget request, with a number of steps being taken in 2023 and early 2024 to inform any such request.

- Staff has recently engaged WSP as the consulting firm to complete the 2023 update to the Town's Transportation Master Plan (TMP); as part of this TMP scope of work,

there will be an intersection level review of the arterial road network (both Town and Region arterial intersections);

- The intersection review will require input from the Town, and the Region, in terms of afternoon peak period traffic volumes at these intersections; the Town and Region both have Miovision technology installed at the majority of the signalized intersections in the Town of Milton - Miovision captures traffic volume data and this will be provided to WSP for use in their analysis; it is anticipated that by the end of April of this year, every Town of Milton signalized intersection will have Miovision equipment installed;
- In addition to traffic volume data, Town staff will provide signal timing and phasing plans to WSP for all signalized intersections;
- The volume data and signalized intersection plans will be used by WSP to build a Synchro model to analyze the operations of the signalized intersections, and subsequently identify any recommendations for operational and safety improvements, including any identified turning lane requirements. Ultimately, these recommendations would form part of a proposed capital program for staff and subsequent Council consideration, which will be evaluated for risk and feasibility, as well as a cost/benefit analysis (i.e. in some cases, depending on the character of the area, existing land use, active transportation needs; it may not be desirable or feasible to modify the intersection);
- Concurrently, while the TMP work is underway, staff will review existing property available at the arterial intersections, to determine if existing property may be sufficient to accommodate any geometric improvements at the intersections or if additional property is required (or, in some cases, if it is even feasible to acquire property - pending the location of existing buildings/structures in relation to the intersection); property acquisition costs are anticipated to be significant, and may be a deciding factor in which intersections to pursue for retrofit;
- Town staff will also engage with Region of Halton public works staff on this review; the Region of Halton will also form part of the TMP Technical Advisory Committee;
- To note - the Town's Engineering and Parks Standards manual currently identifies property requirements at arterial intersections, in order to accommodate dedicated turn lanes; ultimately, the length of these turn lanes is dictated by the Transportation Impact Study (TIS) work completed in support of any development application (the intent of the standard is to be able to secure property from the applicant of a development application, if that development application is located at an intersection); standard E-14 is attached for reference. The Engineering and Parks Standards Manual is currently undergoing an update, and it is anticipated that the TMP work may also result in updates or additions the Town's standard drawings, in terms of right of way elements;
- Town staff will also review the exiting terms of reference for TIS's (currently available on the Town's website and provided to all development applications as part of the pre-consultation process) to ensure that for new development applications, an appropriate "radius" of impact is being considered, in terms of roadway improvements required by the additional traffic generated by the development subject to the application and TIS;

- Although not isolated to arterial intersections, the TMP work will also update the Active Transportation (AT) Strategy put forth as part of the 2018 TMP, to identify any recommended changes to the Town's current strategy, and also to identify any potential capital projects in terms of the Town's AT network;
- Ultimately, the TMP work is currently scheduled to be finalized in Q1 2024, which will align well with any associated 2025 capital budget requests.

While there will likely be instances where dedicated turn lanes are warranted and can be implemented, it is important to keep in mind that dedicated turn lanes are not always the answer and will not always be feasible. There are challenges in terms of balancing different modes of transportation on our roadways, and this can especially be challenging in retrofit situations (as noted above, in terms of existing land use, location of existing buildings, and the need to accommodate active transportation as well as conventional vehicular transportation).

In addition to vehicular turning lanes, cyclist turning lanes have also been requested to be evaluated. Staff plan to carry out the following steps to address this request:

- Staff has already identified a location at Thompson Road and Louis St. Laurent Avenue that is a candidate for "cross rides" - essentially this is additional pavement marking at the signalized intersection to accommodate a specific area for cyclists to safely navigate the intersection; this location will be painted with cross rides in 2023, as part of the 2023 pavement marking program; an example of what a cross ride generally looks like is attached for reference.
- Staff will review other arterial intersections to determine if the space and current configuration is sufficient to implement cross rides at these locations as well, and if so these locations would be considered as part of the future pavement marking budget request - it is anticipated that this request will form part of the 2024 budget ask at this point;
- Intersections that would warrant further review would be Louis St. Laurent Avenue and Savoline Boulevard (N/S and E/W) Louis St. Laurent Avenue and Bronte Street South (N/S and E/W), Louis St. Laurent Avenue and Leger Way (E/W), Louis St. Laurent Avenue and Farmstead Drive (N/S and E/W), Louis St. Laurent and Ferguson Drive (N/S and E/W), Main St. W. and Scott Boulevard (N/S and E/W) and Main St. W. and Savoline Boulevard (N/S and E/W);
- Staff will complete a municipal scan of the other local municipalities in Halton and surrounding municipalities, as well as current Ontario Traffic Manual (OTM) Guidelines to determine if there are other options to assist cyclists in navigating arterial intersections. It is anticipated that as part of the AT Strategy update work being completed as part of the TMP, this will also be identified/confirmed;
- It should be acknowledged that there has been a recent trend in separating cyclist facilities from the paved portion of the right of way, so this will also be considered in the updated AT Strategy - whether the recommended policy is to continue to accommodate cyclists with on street bike lanes, or if a shift to solely in boulevard AT facilities is recommended; ultimately, this will likely depend on the surrounding land use and road classification;

- Finally, staff has already identified a “bike box” option that will be explored - this was also identified as a potential active transportation initiative as part of the 2018 TMP (Appendix A - Active Transportation Strategy; however due to resource constraints, these have not yet been implemented or explored further). Essentially, this provides a safe space for cyclists to wait while navigating left turns at signalized intersections; staff will review existing Town arterial intersections to determine if there are any existing configurations that could accommodate a bike box, and that are suitably located (i.e. have known cyclist activity), and if so, will plan to request this as a pilot as part of the 2024 budget.
- Due to staffing and resource constrictions, a request for an Active Transportation Coordinator was made to implement the recommendations of the 2018 TMP AT Strategy, but was not supported in previous budget asks; while the above pavement marking considerations (cross rides and potential bike boxes) can likely be addressed to some degree with the existing staff complement, it is anticipated that in order to fully implement recommendations out of the 2023 TMP, that additional staff will be required - if this is determined, this will be considered as part of a 2025 budget request, once the 2023 TMP update and associated AT Strategy update has been completed.

As noted above, the intent of this memo is provide an update in terms of the staff plan to address the Council motions presented for consideration at the February 6, 2023 Council meeting. As staff continue to work through these steps, an additional memo update to Council will be provided, ahead of any 2024 capital budget asks related to these motions.

Thank you, and if any questions at this time, please let me know.