

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

From: Kelly Scherr, P. Eng., MBA, FEC, Deputy City Manager,
Environment & Infrastructure

Subject: 2022 New Traffic and Pedestrian Signals and Pedestrian
Crossovers

Date: May 10, 2022

Recommendation

That on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the planned pedestrian signal and pedestrian crossover installations:

- (a) The installation of the following pedestrian signals **BE APPROVED**:
- i. King Street at Burwell Street and
 - ii. Tecumseh Avenue and Wharncliffe Road South.
- (b) The attached proposed by-law (Appendix A) **BE INTRODUCED** at the Municipal Council meeting to be held on May 24, 2022, for the purpose of amending the Traffic and Parking By-law (PS-114) related to the new pedestrian crossovers planned to be installed in 2022.

Linkage to the Corporate Strategic Plan

The following report supports the Strategic Plan through the strategic focus area of “Building a Sustainable City”. Traffic, pedestrian and cyclists signals along with pedestrian crossovers enable Londoners to move around the city safely and easily in a manner that meets their needs by improving safety for all modes of transportation.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

- Civic Works Committee – April 15, 2016 – [Pedestrian Crossover Program](#); and
- Civic Works Committee – May 19, 2019 – [Traffic Signal Warrant Process](#).

2.0 Discussion and Considerations

2.1 Pedestrian and Cyclist Signal Assessment

Pedestrian signals are implemented based on pedestrian crossing volumes, pedestrian demand in the area and delay experienced by pedestrians. In 2019, Municipal Council approved a new warrant for pedestrian signals that provides a comprehensive decision matrix for the implementation of pedestrian signal and pedestrian crossovers and accounts for desire lines and suppressed pedestrian volumes where safe crossings do not exist.

2.1.1 Near Term Pedestrian Signals

2.2.1.1 King Street at Burwell Street

This pedestrian signal is part of the 2022 Rapid Transit project and provides controlled access to and from the new transit station.

2.2.1.2 Tecumseh Avenue at Wharncliffe Road South

The Tecumseh Avenue pedestrian signal is recommended at this location to provide an additional controlled crossing of Wharncliffe Road South.

2.2 Pedestrian Crossover Assessment

The OTM contains three types of pedestrian crossovers (PXOs). All PXOs have pavement markings and signage. To distinguish the different types:

- PXO Type D also has boulevard signs;
- PXO Type C also has boulevard signs and pedestrian activated flashers;
- PXO Type B also has boulevard and overhead signs with pedestrian activated flashers.

The warrant process for a PXO considers the volume of pedestrians and the desire lines of pedestrians. The OTM provides additional guidance for the selection of the appropriate PXO type based on traffic volumes and the posted speed limit of the road.

2.2.1 Near-term Pedestrian Crossovers

The following tables list PXOs recommended for construction in 2022:

Type B PXOs

Street Name	Location
Egerton Street	A point 150 m south of Homan Street
Pond Mills Road	A point 150 m east of Scenic Drive
Pond Mills Road	South side of intersection with Cleveland Avenue
Pond Mills Road	South side of intersection with Pond View Road
Riverside Drive	East side of intersection with Pinetree Drive
Talbot Street	South side of intersection with Kent St
Trafalgar Street	West side of intersection with Bancroft Road

Type D PXOs

Street Name	Location
Aldersbrook Road	A point 79 m east of Fox Hollow Crescent (east intersection)
Aldersbrook Road	A point 95 m east of Aldersbrook Crescent
Blackacres Boulevard	West side of intersection with Winding Woods Crescent (east intersection)
Chelton Road	North side of intersection with Cardigan Dr

Churchill Avenue	West side of intersection with Manitoba Street
Coronation Drive	West side of intersection with Healy Road
Darnley Boulevard	West side of intersection with Cardigan Drive
Empress Avenue	West side of intersection with St Andrews Street
Fiddlers Green Road	A point 158 m east of Hyde Park Road
Fuller Street	West side of intersection with Regal Drive
Fuller Street	West side of intersection with Vesta Road
Griffith Street	South side of intersection with Wayne Road
Hawthorne Road	West side of intersection with Tanoak Drive
Hickson Avenue	A point 175 m east of Ridout Street North
Langley Street	East side of intersection with Windsor Avenue
Skyline Avenue	East side of intersection with Elderberry Avenue
St Andrews Street	South side of intersection with St Patrick Street
Tokala Trail	West side of intersection with Couldridge Way
Tokala Trail	West side of intersection with Foxridge Cres (west intersection)
Windsor Avenue	East side of intersection with Langley Street

2.3 Traffic Signal Assessment

Traffic signals are designed to ensure a safe and orderly flow of traffic, provide safety for pedestrians, bicyclists and/or motor vehicle drivers when crossing a busy intersection. Traffic signals also mitigate the severity and frequency of collisions with vehicles entering intersections from different directions; however, the frequency of the less severe rear-end collisions may increase with the installation of a traffic signal. Traffic signals can be detrimental to the operational efficiency of a roadway system, leading to driver frustration and increased vehicle emissions; it is therefore important to ensure they are only used at appropriate locations consistent with warrant justification.

The Ontario Traffic Manual (OTM) specifies a warrant process that is followed in London and it is consistent with the warrant process used across North America, which assists with creating consistent driver expectation. The process takes into consideration:

- The volume of traffic/pedestrians using the intersection;
- The delay experienced by side street traffic/pedestrians; and,
- The collision history of the intersection.

A warrant-based approach is important as unneeded signalized intersections can be detrimental to the operational efficiency of the roadway network. Adherence to consistent warrants also helps foster consistent driver expectations and minimizes liability for municipalities.

No new traffic signals are identified for approval at this time; however, there are several previously approved locations scheduled to be constructed this year as identified in Section 2.4.

Proactive monitoring of potential future locations is important for planning purposes. Appendix B includes a list of intersections where a traffic signal is being monitored and considered for future implementation.

2.4 Previously Approved Traffic Control Devices

The following traffic control devices were previously approved and scheduled to be constructed in 2022:

Street	Location	Traffic Control Type
Commissioners Rd West	West Springbank Park Entrance	Pedestrian Signal
Edgevalley Rd	Highbury Avenue North	Traffic Signal
Hamilton Road	Inkerman Street	Pedestrian Signal
Hamilton Road	Pine Lane Avenue	Pedestrian Signal
North Routledge Parkway	Hyde Park Road	Traffic Signal
Oxford Street East	William Street	Pedestrian and Cyclist Signal
Southdale Road East	Millbank Drive (west intersection)	Pedestrian Signal
Springbank Drive	Quinella Drive	Pedestrian Signal

3.0 Financial Impact/Considerations

3.1 Operating Budget

The annual cost starting in 2023, to maintain the two new recommended new pedestrian signals is \$25,500 including electricity consumption.

The annual cost to maintain the recommended new PXOs is \$21,000 starting in 2023.

3.1 Capital Budget

The estimated cost to construct the two new recommended pedestrian signals is \$430,000. There are sufficient funds available in the approved Growth Capital budget for these new signals.

The estimated cost to install the recommended PXOs is \$500,000. There is no dedicated budget for pedestrian crossings; however, the installation of the recommended PXOs can be accommodated within the approved Capital budget.

Conclusion

The traffic and pedestrian signals and pedestrian crossings described herein, are recommended to create a more accessible and safe transportation system. Traffic control assessment balances the needs of all road users and optimizes safety. Signals are design to accommodate all users and in accordance with AODA requirements. The warrant approach used is standardized across Ontario and fosters consistent road user expectation and manages municipal liability.

If approved, construction of the pedestrian signals and pedestrian crossovers are scheduled for 2022. Current supply chain constraints have delayed some of the materials required for this type of infrastructure and that risk will be managed in the delivery of the programs.

Prepared by: **Shane Maguire, P. Eng., Division Manager, Traffic Engineering**

Submitted by: **Doug MacRae, P. Eng., MPA, Director, Transportation & Mobility**

Recommended by: **Kelly Scherr, P. Eng., MBA, FEC, Deputy City Manager, Environment & Infrastructure**

May 2, 2022/

Attach: Appendix A: By-law to amend the Traffic and Parking By-law (PS-114)
Appendix B: Future Signal Monitoring

APPENDIX A: By-law to amend the Traffic and Parking By-law (PS-114)

Bill No.

By-law No. PS-114

A by-law to amend By-law PS-114 entitled, “A by-law to regulate traffic and the parking of motor vehicles in the City of London.”

WHEREAS subsection 10(2) paragraph 7. Of the *Municipal Act, 2001*, S.O. 2001, c.25, as amended, provides that a municipality may pass by-laws to provide any service or thing that the municipality considers necessary or desirable to the public;

AND WHEREAS subsection 5(3) of the *Municipal Act, 2001*, as amended, provides that a municipal power shall be exercised by by-law;

NOW THEREFORE the Municipal Council of The Corporation of the City of London enacts as follows:

1. Pedestrian Crossovers

Schedule 23 of By-law PS-114 is hereby amended by **adding** the following rows:

1-Street	2-Location
Aldersbrook Road	A point 79 m east of Fox Hollow Crescent (east intersection)
Aldersbrook Road	A point 95 m east of Aldersbrook Crescent
Blackacres Boulevard	West side of intersection with Winding Woods Crescent (east intersection)
Chelton Road	North side of intersection with Cardigan Drive
Churchill Avenue	West side of intersection with Manitoba Street
Coronation Drive	West side of intersection with Healy Road
Darnley Boulevard	West side of intersection with Cardigan Drive
Egerton Street	A point 150 m south of Homan Street
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Tokala Trail	West side of intersection with Foxridge Cres (west intersection)
Trafalgar Street	West side of intersection with Bancroft Road
Windsor Avenue	East side of intersection with Langley Street

This by-law comes into force and effect on the day it is passed.

PASSED in Open Council on May 24, 2022.

Ed Holder
Mayor

Michael Schulthess
City Clerk

First Reading – May 24, 2022
Second Reading – May 24, 2022
Third Reading – May 24, 2022

APPENDIX B: Future Traffic Signal Monitoring

East-West Street	North-South Street	Minimum Volume Warrant ⁽¹⁾	Delay Warrant ⁽¹⁾	Comment
Commissioners Road East	Chelton Road	53%	95%	Construction is planned for 2023 ⁽²⁾ .
Fanshawe Park Road East	Stackhouse Avenue	45%	68%	Continue to monitor as development north of Fanshawe Park Road East increases.
Gainsborough Road	Sherwood Forest Mall	88%	100%	Currently an intersection pedestrian signal. Construction is planned for 2023 ⁽²⁾ .
Hamilton Road	Clarke Road	79%	79%	Design is complete. Construction is planned for 2023 ⁽²⁾ .
Sunningdale Road East	Clarke Road	81%	56%	Continue to monitor as development in the area increases. Construction is tentatively planned for 2025 ⁽²⁾ .

Notes:

- (1) Warrants should be met for justification and infrastructure consistency. For traffic signals the warrant considers volume and delay. Warrant is met when
 - a. Either the volume or delay warrant measures 100%, or
 - b. Both the volume and delay warrants measure at least 80%.
- (2) Construction dates are tentative and are dependent on sufficient Capital budget funds.