Report to Civic Works Committee

To: **Chair and Members**
Civic Works Committee
From: **Kelly Scherr, P. Eng., MBA, FEC, Managing Director, Environmental and Engineering Services and City Engineer**
Subject: **2021 New Traffic and Pedestrian Signals and Pedestrian Crossovers**
Date: **April 20, 2021**

Recommendation

That on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the planned signal and pedestrian crossover installations:

(a) The installation of the following traffic signals **BE APPROVED**:

i. Edgevalley Road at Highbury Avenue North;
ii. Gainsborough Road at Coronation Drive (west intersection);
iii. Huron Street at Vesta Road;
iv. North Routledge Park at Hyde Park Road; and,
v. Sunningdale Road East at North Wenige Drive.

(b) The installation of the following pedestrian signals **BE APPROVED**:

i. Commissioners Road West at West Springbank Park Entrance; and,
ii. Springbank Drive at Quinella Drive

(c) The attached proposed by-law (Appendix A) **BE INTRODUCED** at the Municipal Council meeting to be held on May 4, 2021, for the purpose of amending the Traffic and Parking By-law (PS-113) related to the new pedestrian crossovers planned to be installed in 2021.

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 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.

2.1.1 Near Term Traffic Signals

2.1.1.1 Edgevalley Road at Highbury Avenue North

Traffic volumes on Edgevalley Road have grown with the development of the lands east of Highbury Avenue North. The signalization of this intersection is recommended to address this growth in vehicular and pedestrian traffic.

2.1.1.2 Gainsborough Road at Coronation Drive (west intersection)

Traffic growth on Gainsborough Road and Coronation Drive has increased with development in the area. Additional development south of Gainsborough Road is planned. The intersection satisfies the combined volume and delay warrant for signalization.

2.1.1.3 Huron Street at Vesta Road

An intersection pedestrian signal was installed on Huron Street immediately east of Vesta Road in 2010 to provide a controlled pedestrian crossing. The volume of traffic using Huron Street has increased and signalization is recommended based on the delay warrant.

2.1.1.4 North Routledge Park at Hyde Park Road

New developments on both sides of Hyde Park Road have resulted in additional vehicle and pedestrian traffic accessing the road at the north crossing of North Routledge Park / Coronation Drive. It is recommended to install a traffic signal at this location to address this additional growth in traffic.

2.1.1.5 Sunningdale Road East at North Wenige Drive

Traffic growth on Sunningdale Road East and North Wenige Drive has increased with development in the area. The intersection satisfies the combined volume and delay warrant for signalization.

Appendix A includes a list of intersections where a traffic signal is being considered.

2.2 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 bridges the gap between pedestrian signal and pedestrian crossovers.

In 2020, London's first pedestrian/cyclist signal was installed on Riverside Drive at Wilson Avenue. Another is planned for Oxford Street at William Street in 2021. The inclusion of cyclist signals improves connections within the cycling network.

Appendix A contains locations where the need for signals is currently being studied.

2.2.1 Near Term Pedestrian Signals

2.2.1.1 Commissioners Road West at West Springbank Park Entrance

New additional high rise residential construction is nearing completion on the south side of Commissioners Road West across from Springbank Park. A pedestrian signal is recommended at the west entrance to the park to allow pedestrians to access the park and the bus stop on the north side of the road.

2.2.1.2 Springbank Drive at Quinella Drive

During the eight-hour study period, 89 pedestrians were observed crossing Springbank Drive in the vicinity of Quinella Drive. Fifty-nine (59) percent of those pedestrian were seniors. A pedestrian signal is recommended to provide access to bus stops, Springbank Park and the Civic Gardens Centre Complex. A sidewalk on the south side of Springbank Drive will allow pedestrians west of Quinella Drive to access the new pedestrian signal.

Studies scheduled for later this year may identify new pedestrian signal locations.

2.3 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 has boulevard signs;
- PXO Type C has boulevard signs and pedestrian activated flashers;
- PXO Type B 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.

2.3.1 Near-term Pedestrian Crossovers

The following tables list PXOs recommended for construction in 2021:

Type B PXOs

Street Name	Location
Gainsborough Road	At a point 230 m west of Prince of Wales Gate (former railway crossing connecting the pathways)
Huron Street	At a point 174 m west of Briarhill Avenue
Platt's Lane	North side of the intersection with Cherryhill Place
Talbot Street	South side of the intersection with Kent Street
Wavell Street	At a point 20 m west of Kiwanis Park Drive
Wavell Street	East side of the intersection with Merlin Crescent

Type C PXOs

Street Name	Location
Waterloo Street	At a point 143 m south of Epworth Avenue connecting paths

Type D PXOs

Street Name	Location
Campbell Street North	North side of intersection with James Street
Chelton Road	South side of the intersection with Cardigan Drive
Coombs Avenue	South side of the intersection with Ford Crescent
Dalmagarry Road	Coronation Drive (roundabout)
Dalmagarry Road	South of Fanshawe Pk Road West at walkway
Forward Avenue	West side of the intersection with Wood Street
Hillside Drive	East side of the intersection with Taplow Road
Iroquois Avenue	West side of the intersection with Murray Road
Limberlost Road	North side of the intersection with Fairfax Court
Oakcrossing Road	South side of the intersection with Whetherfield Street
Shavian Blvd	South side of the intersection with McStay Road
Sorrel Road	At a point 61 m south of Perth Avenue
South Wenige Drive	South side of the intersection with Father Daulton Avenue
Topping Lane	South side of the intersection with Eaton Park Drive
Viscount Road	At a point 59 m east of Monte Vista Cres connecting park paths

2.4 Previously Approved Traffic Control Devices

The following traffic control devices were previously approved and scheduled to be constructed in 2021:

Street	Location	Traffic Control Type
Pack Road	Colonel Talbot Road	Traffic Signal
Wilton Grove Road	Commerce Road	Traffic Signal
Hamilton Road	Inkerman Street	Pedestrian Signal
Hamilton Road	Pine Lane Avenue	Pedestrian Signal
Southdale Road East	Millbank Drive (west leg)	Pedestrian Signal
Oxford Street East	William Street	Pedestrian and Cyclist Signal
Baseline Road West	West Street	Type D PXO
Churchill Avenue	Calgary Street	Type D PXO
Dundas Street	At a point 122 m east of Adelaide Street North	Type C PXO
Valetta Street	Adevon Avenue	Type D PXO

3.0 Financial Impact/Considerations

3.1 Operating Budget

The annual cost starting in 2022, to maintain the recommended new traffic and pedestrian signals is $70,000 including electricity consumption.

The annual cost to maintain the recommended new PXOs is $12,000 starting in 2022.

3.1 Capital Budget

The estimated cost to construct the five recommended traffic signals and two pedestrian signals is $1,855,000. There are sufficient funds available in the approved Growth Capital budget for these new signals.

The estimated cost to install the recommended PXOs is $350,000. There is no dedicated budget for pedestrian crossovers; however, the installation of the recommended PXOs can be accommodated within the approved Capital budget.

Conclusion

The traffic and pedestrian signals and pedestrian crossovers 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 traffic signals will occur in 2022 and the pedestrian signals in 2021. The installation of the pedestrian crossovers is scheduled for 2021.

Prepared by:	**Shane Maguire, P. Eng., Division Manager, Roadway Lighting and Traffic Control**
Submitted by:	**Doug MacRae, P. Eng., MPA, Director, Roads and Transportation**
Recommended by:	**Kelly Scherr, P. Eng., MBA, FEC, Managing Director, Environmental and Engineering Services and City Engineer**

April 12, 2021/

Attach: Appendix A: By-law to amend the Traffic and Parking By-law (PS-113)
Appendix B: Future Traffic Signal Monitoring

APPENDIX A: By-law to amend the Traffic and Parking By-law (PS-113)

Bill No.

By-law No. PS-113

A by-law to amend By-law PS-113 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 13.1 of By-law PS-113 is hereby amended by **adding** the following rows:

Street Name	Location
Campbell Street North	North side of the intersection with James Street
Chelton Road	South side of the intersection with Cardigan Drive
Coombs Avenue	South side of the intersection with Ford Crescent
Coronation Drive	West side of the intersection with Dalmagarry Road
Coronation Drive	East side of the intersection with Dalmagarry Road
Dalmagarry Road	North side of intersection with Coronation Drive
Dalmagarry Road	South of Fanshawe Park Road West at walkway
Forward Avenue	West side of the intersection with Wood Street
Hillside Drive	East side of the intersection with Taplow Road
Iroquois Avenue	West side of the intersection with Murray Road
Limberlost Road	North side of the intersection with Fairfax Court
Oakcrossing Road	South side of the intersection with Whetherfield Street
Shavian Boulevard	South side of the intersection with McStay Road
Sorrel Road	At a point 61 m south of Perth Avenue
South Wenige Drive	South side of the intersection with Father Daulton Avenue
Topping Lane	South side of the intersection with Eaton Park Drive
Viscount Road	At a point 59 m east of Monte Vista Cres connecting park paths

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

PASSED in Open Council on May 4, 2021

Ed Holder

Mayor

Catharine Saunders

City Clerk

First Reading – May 4, 2021
Second Reading – May 4, 2021
Third Reading – May 4, 2021

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 2023(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.