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: **New Traffic Signals, Pedestrian Signals and Pedestrian Crossovers**
Date: **May 22, 2024**

Recommendation

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

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

i. Byron Baseline Road at Lansing Avenue
ii. Dundas Street at Ashland Avenue
iii. Dundas Street at Kellogg Lane
iv. Dundas Street at Eleanor Street
v. Highbury Avenue N at Canada Post Driveway
vi. Longwoods Road at Westdel Bourne
vii. Queens Avenue at English Street

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

i. Fanshawe Park Road W at Hyde Park Rotary Link
ii. Oxford Street W at Summit Avenue
iii. Richmond Street at Plane Tree Drive
iv. Sunningdale Road E at Canvas Way
v. Adelaide Street N at Victoria Street

(c) The attached proposed by-law (Appendix A) **BE INTRODUCED** at the Municipal Council meeting to be held on June 4, 2024, for the purpose of amending the Traffic and Parking By-law (PS-114) related to the new pedestrian crossovers planned to be installed in 2024.

Linkage to the Corporate Strategic Plan

The following report supports Council's Strategic Plan through the strategic focus areas of Mobility and Transportation and Wellbeing and Safety. Traffic and pedestrian signals along with pedestrian crossovers are infrastructure that provides safe, integrated, connected, reliable and efficient transportation choices.

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.

1.2 Purpose

This is an annual report to recommend the installation of new traffic signals and pedestrian signals on London streets. The implementation of many locations will occur in 2024 with some occurring in 2025. The report also identifies new pedestrian crossovers planned to be installed in 2024 for the purpose of amending the Traffic and Parking By-law (PS-114).

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 and safety of the roadway network. Adherence to consistent warrants also helps foster consistent driver expectations and minimizes liability for municipalities.

2.2 New Traffic Signals

The following table provides the background on the traffic signals proposed for approval in this report.

Location	Background Information
Byron Baseline Road at Lansing Avenue	The conversion of a traffic signal is recommended to address in the increased traffic from new developments to the west. Construction is planned to start in 2024.
Dundas Street at Ashland Avenue, Dundas Street at Kellogg Lane, and Dundas Street at Eleanor Street	These traffic signals were identified in the Rapid Transit Environmental Assessment and are to be constructed as part of the East London Link project.
Highbury Avenue N at Canada Post Driveway	This traffic signal located approximately 286 m south of Oxford Street E was identified in the Rapid Transit Environmental Assessment and is to be constructed as part of the East London Link project.

Longwoods Road at Westdel Bourne	A traffic signal is recommended to address the increased traffic volumes due to the new developments along Westdel Bourne
Queens Avenue at English Street	An intersection in-service safety review was conducted in 2023 which identified that a traffic signal would help mitigate the number of collisions at this intersection. In order to address the immediate safety concerns a temporary traffic signal was installed in the Fall of 2023. A permanent traffic signal is planned for 2024.

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.

2.3 Pedestrian and Cyclist Signal Assessment

Pedestrian signals are implemented on high volume streets 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.

2.3.1 Near Term Pedestrian Signals

The following are pedestrian signals recommended for construction:

2.3.1.1 Fanshawe Park Road W at London Hyde Park Rotary Link

The recommended pedestrian signal will connect the two sections of the London Hyde Park Rotary Link. The signal will be constructed approximately 667 m west of Hyde Park Road. Implementation will be timed with planned improvements to the pathway.

2.3.1.2 Oxford Street W at Summit Avenue

This pedestrian signal is recommended to facilitate pedestrian access Oxford Street W for improved access to destinations, transit stops and walking routes.

2.3.1.3 Richmond Street at Plane Tree Drive

This pedestrian signal is recommended to facilitate east-west pedestrian travel and access to transit on Richmond Street.

2.3.1.4 Sunningdale Road E at Canvas Way

This pedestrian signal is recommended to facilitate connectivity between the Northbrook Valley pathway south of Sunningdale Road E and neighbourhoods and pathways to the north.

2.3.1.5 Victoria Street at Adelaide Street N

This pedestrian signal is recommended to facilitate pedestrian access to bus stops on either side of Adelaide Street N and access to neighbouring businesses and neighbourhoods.

2.4 Pedestrian Crossover Assessment

The OTM has three types of pedestrian crossovers (PXOs) for lower volume streets. 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.

2.4.1 Near-term Pedestrian Crossovers

The following tables list PXOs recommended for construction in 2024:

Type C PXOs

Street Name	Location
Hale Street	North side at the intersection of Trafalgar Street
Hale Street	South side at the intersection of Trafalgar Street
Hamilton Road	A point 400 m east of Gore Road
High Street	North side of intersection with Tecumseh Avenue E.
Richmond Street	At Western Road on the southbound right-turn ramp at a point 19 m from Richmond Street
Trafalgar Street	East side at the intersection of Hale Street
Trafalgar Street	West side at the intersection of Hale Street
Windermere Road	A point 190 m west of Adelaide Street

Type D PXOs

Street Name	Location
Aldersbrook Road	A point 57 m north of Brady Lane Road (north intersection)
Barker Street	A point 48 m south of Corinth Court.
Basswood Road	East side of intersection with Basswood Place
Brunswick Avenue	East side of the intersection with Coronation Drive
Brunswick Avenue	West side of the intersection with Coronation Drive
Burlington Street	A point 90m south of Paymaster Avenue
Clermont Avenue	East side of Fremont Avenue
Colborne Street	North side of intersection with Simcoe Street
Coronation Drive	North side of the intersection with Brunswick Avenue

Coronation Drive	South side of the intersection with Brunswick Avenue
Edmonton Street	North side of intersection with Churchill Avenue
Grand Avenue	West side of intersection with Gerrard Street
Highview Avenue E	South side of the intersection with Rossmore Place
Highview Avenue E	North side of the intersection with Rossmore Court
Hillcrest Avenue	West side of intersection with Vesta Road
Kains Road	North side of intersection with Kirkpatrick Gate
Limberlost Road	A point 290 m north of Lawson Road
Marconi Boulevard	East of intersection with Yarmouth Drive
Pawnee Road	A point 81 m east of Pawnee Gate
Saskatoon Street	South side of Intersection with Borden Street
Shore Road	West side of intersection with Kains Woods Terrace
Singleton Avenue	South side of Jinnies Street
Third Street	A point 259 m south of Oxford Street
Valetta Street	West side of intersection with Oak Park Drive
Viscount Road	East side of intersection with Village Green Avenue
Windermere Road	A point 260 m west of Corley Drive (west intersection)
Windermere Road	West side of intersection with Corely Drive (west intersection)
Windermere Road	A point 313 m west of Western Road

2.4.2 Existing Pedestrian Crossovers

During the review of potential PXO locations it was determined that 11 existing PXOs were missing from the Traffic and Parking By-law. These PXOs are listed below and it is recommended that these be added Schedule 18 (Pedestrian Crossovers.

Street Name	**Location**
Admiral Drive	A point 150 m north of Trafalgar Street
Askin Street	A point 65 m east of Wharncliffe Road S
Gainsborough Rd	A point 231 m west of Prince of Wales Gate
Huron St	A point 176 m west of Briarhill Ave
Merlin Crescent	A point 42 m south of Royal Crescent
Platt's Lane	South side of intersection with Cherryhill Place
Shore Road	West side of intersection with Kains Woods Terrace
Skyline Avenue	A point 63 m west of Elderberry Avenue
Waterloo St	A point 140 m south of Epworth Avenue
Wavell Street	A point 20 m west of Kiwanis Park Drive
Wavell Street	East side of the intersection with Merlin Crescent

3.0 Financial Impact/Considerations

3.1 Operating Budget

The annual cost starting in 2024, to maintain the new recommended traffic and pedestrian signals is $133,900 including electricity consumption.

The annual cost to maintain the recommended new PXOs is $43,300 starting in 2024.

3.1 Capital Budget

Two of the new traffic signals are funded as part of the larger East London Link and Wellington Gateway projects and one is part of the Bradley Avenue W Extension project. The cost to construct the remaining recommended signals will be funded via the Transportation Growth capital budget.

The pedestrian crossovers listed have been approved for federal funding under the Investing in Canada Infrastructure Program (ICIP) Public Transit Stream (PTS) New Pedestrian Crossings project. The estimated cost to install the recommended PXOs is $500,000, excluding HST.

Conclusion

The traffic signals, 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 designed to accommodate all users and in accordance with Accessibility for Ontarians with Disabilities Act requirements. The traffic signal warrant approach used is standardized across Ontario and fosters consistent road user expectation and manages municipal liability. London's modification to the pedestrian signal warrant provides further consideration of pedestrian desire lines and suppressed use prior to implementation.

If approved, construction of the pedestrian signals and pedestrian crossovers are scheduled for 2024 and 2025. 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:	**Ted Koza, 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**

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

1-Street	2-Location
Admiral Drive	A point 150 m north of Trafalgar Street
Aldersbrook Road	A point 57 m north of Brady Lane Rd (north intersection)
Askin Street	A point 65 m east of Wharncliffe Road S
Barker Street	A point 48 m south of Corinth Court
Basswood Road	East side of intersection with Basswood Place
Brunswick Avenue	East side of intersection with Coronation Drive
Brunswick Avenue	West side of intersection with Coronation Drive
Burlington Street	A point 90m south of Paymaster Avenue
Clermont Avenue	East side of intersection with Fremont Avenue
Colborne Street	North side of intersection with Simcoe Street
Coronation Drive	North side of intersection with Brunswick Avenue
Coronation Drive	South side of intersection with Brunswick Avenue
Edmonton Street	North side of intersection with Churchill Avenue
Gainsborough Rd	A point 231 m west of Prince of Wales Gate
Grand Avenue	West side of intersection with Gerrard Street
Hale Street	North side of intersection with Trafalgar Street
Hale Street	South side of intersection with Trafalgar Street
Hamilton Road	A point 400 m east of Gore Road
High Street	North side of intersection with Tecumseh Avenue E.
Highview Avenue E	South side of the intersection with Rossmore Place
Highview Avenue E	North side of the intersection with Rossmore Court
Hillcrest Avenue	West side of intersection with Vesta Road
Huron St	A point 176 m west of Briarhill Ave

Kains Road	North side of intersection with Kirkpatrick Gate
Limberlost Road	A point 290 m north of Lawson Road
Marconi Boulevard	East of intersection with Yarmouth Drive
Merlin Crescent	A point 42 m south of Royal Crescent
Pawnee Road	A point 81 m east of Pawnee Gate
Platt's Lane	South side of intersection with Cherryhill Place
Richmond Street	At Western Road on the southbound right-turn ramp at a point 19 m from Richmond Street
Royal York Road	South side of intersection with Hunt Club Drive
Saskatoon Street	South side of Intersection with Borden Street
Shore Road	West side of intersection with Kains Woods Terrace
Silverfox Drive	South side of intersection with Silverfox crescent
Singleton Avenue	Southside of Jinnies Street
Skyline Avenue	A point 63 m west of Elderberry Avenue
Third Street	A point 259 m south of Oxford Street
Trafalgar Street	East side of intersection with Hale Street
Trafalgar Street	West side of intersection with Hale Street
Valetta Street	West side of intersection with Oak Park Drive
Viscount Road	East side of intersection with Village Green Avenue
Waterloo St	A point 140 m south of Epworth Avenue
Wavell Street	A point 20 m west of Kiwanis Park Drive
Wavell Street	East side of the intersection with Merlin Crescent
Windermere Road	A point 260 m west of Corley Drive (west intersection)
Windermere Road	West side of intersection with Corely Drive (west intersection)
Windermere Road	A point 313 m west of Western Road
Windermere Road	A point 190 m west of Adelaide Street

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

PASSED in Open Council on June 6, 2023.

Josh Morgan
Mayor

Michael Schulthess
City Clerk

First Reading – June 6, 2023
Second Reading – June 6, 2023
Third Reading – June 6, 2023

APPENDIX B: Future Traffic Signal Monitoring

East-West Street	North-South Street	Minimum Volume Warrant (1)	Delay Warrant (1)	Comment
Bradley Avenue	Highbury Avenue N	42%	72%	Continue to monitor.
Bradley Avenue	Old Victoria Road	95%	88%	Begin the detailed design phase.
Byron Baseline Road	Griffith Street	84%	76%	Existing all-way stop. Continue to monitor.
Fanshawe Park Road East	Stackhouse Avenue	42%	71%	Continue to monitor as development north of Fanshawe Park Road East increases.
Sarnia Road	Beaverbrook Avenue	40%	86%	Continue to monitor as development continues.
Sarnia Road	Oakcrossing Gate	78%	51%	Continue to monitor as development continues.
Savoy Street	Wharncliffe Road S	33%	81%	Continue to monitor as development continues.
Sunningdale Road E	Clarke Road	95%	55%	Continue to monitor as development in the area increases. Construction is tentatively planned for 2025(2).
Sunningdale Road W	Meadowlands Way	62%	75%	Continue to monitor as development continues.
Sunningdale Road W	Villagewalk Boulevard	48%	30%	Continue to monitor as development continues.

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.