Agenda
Civic Works Committee

12th Meeting of the Civic Works Committee

August 13, 2018, 12:00 PM

Council Chambers

Members

Councillors V. Ridley, T. Park, P. Hubert, P. Squire, H. Usher, Mayor M. Brown

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The Committee will recess at approximately 6:30 PM for dinner, as required.

Transportation Advisory Committee

Report

6th Meeting of the Transportation Advisory Committee
July 24, 2018
Committee Room #4

Attendance

PRESENT: A. Stratton (Acting Chair), G. Bikas, S. Brooks, D. Doroshenko, D. Foster, T. Khan, L. Norman, and J. Scarterfield and J. Bunn (Committee Secretary)

ABSENT: G. Debbert, A. Farahi, J. Madden and H. Moussa

ALSO PRESENT: D. Chang, M. Elmadhoon, D. Hall, P. Kavcic, J. Kostyniuk, T. Koza, T. Macbeth, D. MacRae and S. Shannon

The meeting was called to order at 12:15 PM.

1. Call to Order

1.1 Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. Scheduled Items

2.1 Municipal Class Environmental Assessment - Clarke Road Widening from the Veterans Memorial Parkway Extension to Fanshawe Park Road East

That the attached presentation from I. Bartlett, Stantec Consulting Ltd., with respect to the Municipal Class Environmental Assessment related to the Clarke Road Widening from the Veterans Memorial Parkway Extension to Fanshawe Park Road East, BE REFERRED to the Review Sub-Committee, led by T. Khan and D. Foster, for review and a report back to the Transportation Advisory Committee at the next meeting.

2.2 London Transportation Alliance – Mobility Plan

That it BE NOTED that a verbal presentation from R. Moretti, London Transportation Alliance, with respect to the London Transportation Alliance's Mobility Plan, was received.

3. Consent

3.1 5th Report of the Transportation Advisory Committee

That it BE NOTED that the 5th Report of the Transportation Advisory Committee, from its meeting held on June 26, 2018, was received.

3.2 Municipal Council Resolution - Appointment of Danny Chang

That it BE NOTED that the Municipal Council resolution, from its meeting held on June 26, 2018, with respect to the appointment of Danny Chang to the Transportation Advisory Committee, was received.

3.3 Notice of Public Information Centre - Clarke Road Improvements - Veterans Memorial Parkway Extension to Fanshawe Park Road East - Municipal Class Environmental Assessment

That it BE NOTED that the Notice of Public Information Centre from P. Kavcic, City of London and I. Bartlett, Stantec Consulting Ltd., with respect to the Clarke Road Improvements from the Veterans Memorial Parkway Extension and Fanshawe Park Road East Municipal Class Environmental Assessment, was received.

3.4 Highbury Avenue/Hamilton Road Intersection Improvements - Environmental Assessment Study - Notice of Completion

That it BE NOTED that the Notice of Completion from B. Huston, Dillon Consulting Limited and M. Elmadhoon, City of London, with respect to the Highbury Avenue/Hamilton Road Intersection Improvements Environmental Assessment Study, was received.

4. Sub-Committees and Working Groups

4.1 2018 TAC Work Plan Working Group

That the Transportation Advisory Committee (TAC) Work Plan Working Group BE DIRECTED to submit the following items for the September 25, 2018 TAC Agenda:

· an integrated Work Plan document for the purpose of developing a detailed Work Plan for presentation to and approval of the TAC;

· a draft detailed Work Plan; and,

· a draft process for the addition of new items to the integrated Work Plan for review and adjustment by the TAC;

it being noted that the presentation from T. Khan and D. Foster, as appended to the Added Agenda, was received with respect to this matter.

5. Items for Discussion

None.

6. Deferred Matters/Additional Business

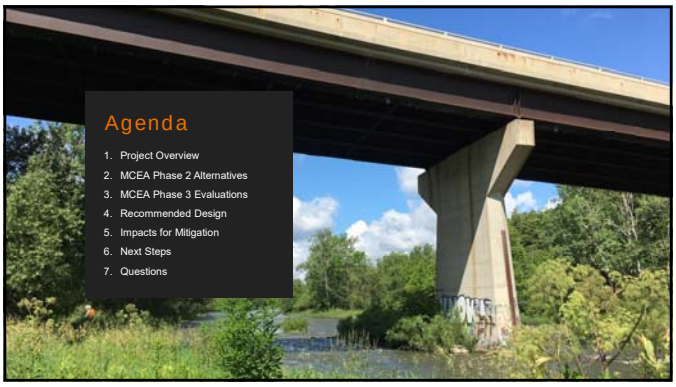
None.

7. Adjournment

The meeting adjourned at 2:50 PM.

City of London
Clarke Road Improvements
Municipal Class EA

TAC Presentation
July 24, 2018



Agenda

1. Project Overview
2. MCEA Phase 2 Alternatives
3. MCEA Phase 3 Evaluations
4. Recommended Design
5. Impacts for Mitigation
6. Next Steps
7. Questions

Project Overview - Study Area

The study area includes the Clarke Road corridor from its intersection with the future Veterans Memorial Parkway (VMP) extension (currently under detailed design) to its intersection with Fanshawe Park Road East.

Intersections within the study area include:

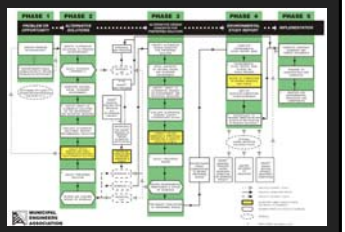
- Future VMP Extension;
- Kilally Road; and
- Fanshawe Park Road East.

Structures within the study area include:

- J.W. Carson Bridge over the North Branch of the Thames River

Project Overview - Timelines

June 2017 - Study Commencement and Notice
September 2017 - Public Information Centre #1
January 2018 - UTRCA Meeting
May 2018 - MNRF Meeting
June 2018 - Public Information Centre #2 & Property Owner Meetings
July-August 2018 – Public Input & City Committee Meetings
September 2018 - Draft ESR to MOECP
November 2018 – CWC and Council
Winter 2018 - Filing of ESR with MOECP
TBD - Construction



Phase 2 - Alternative Solutions

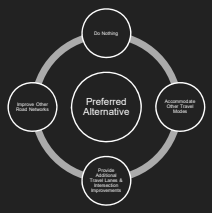
Alternative solutions identified for the study area include:

Alternative 1: Do Nothing - No proposed changes within the study area; provides a basis to compare other alternatives.

Alternative 2: Improve Other Roads in the Transportation Network - Introduce improvements to adjacent and/or parallel roadways to reduce travel demand on Clarke Road.

Alternative 3: Accommodate Other Travel Modes - Introduce improvements to accommodate transit services and encourage active transportation.

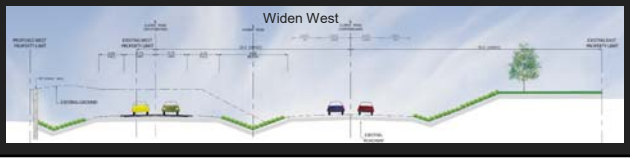
Alternative 4: Provide Additional Travel Lanes & Intersection Improvements - Introduce additional travel lanes along Clarke Road to increase vehicular capacity, and introduce improvements to intersections (i.e. roundabouts, traffic signals) within the study area to improve traffic movement and safety.



Phase 2 - Carry Forward to Phase 3

Alternative	Evaluation Summary	Recommendation
Alternative 1 - Do Nothing	Does not address problems and opportunities identified in the study area.	Not recommended for further consideration (for comparison purposes only).
Alternative 2 - Improve Other Roads in the Network	There are no feasible parallel routes that will address corridor deficiencies along Clarke Road, and does not address the City's transportation planning objectives.	Not recommended for further consideration.
Alternative 3 - Accommodate Other Traffic Modes	There are no existing transit or active transportation facilities. Although improvements will likely have negligible impacts on traffic, this alternative is aligned with the City's long term goals and objectives.	Carry forward for further consideration as part of the recommended alternative solution.
Alternative 4 - Provide Additional Travel Lanes & Intersection Improvements	A widened road cross section will provide an opportunity for improved travel time with additional lane capacity; space for on-road cycling facilities; and, safety. Intersection improvements are required to improve the level of service.	Carry forward for further consideration as part of the recommended alternative solution.

Phase 2 - Additional Lane Alternatives

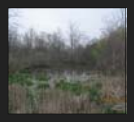


Phase 2 - Additional Lane Alternatives

Phase 3 – Evaluation Considerations

- Clarke Road is designated as an Expressway
- Based on the Transportation Master Plan (TMP) and Development Charge Background Study, Clarke Road should be widened from 2 to 4 lanes in the short-term, with the provision for 6 lanes in the longer term
- Paved shoulders along Clarke Road with multi-use pathway (as per London ON Bikes)
- A major hydro corridor and underground utilities
- A Cultural Heritage resource (1511 Clarke Road "listed" Farmstead c. 1860s)
- Protection of key natural heritage features

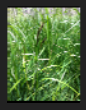


Phase 3 – Evaluation Considerations - Continued

- Designated Natural Features Confirmed Species At Risk Habitat – birds, turtles and snakes
- Suitable Habitat for Species At Risk
- Confirmed Significant Wildlife Habitat
- Candidate Significant Wildlife Habitat
- Other features – unnamed watercourse





Phase 3 - Evaluation Criteria

Socio-Economic Environment
- Existing/future land uses
- Industrial uses
- Residential uses
- Agricultural uses
- Recreational uses

Natural Environment
- Vegetation
- Wildlife and wildlife habitat (including species at risk)
- Aquatic habitats and species (including species at risk)

Cultural Heritage
- Cultural heritage resources
- Archaeological resources

Transportation
- Active Transportation
- Vehicle speeds
- Property accessibility
- Fire and Emergency Medical Services

Engineering Considerations
- Structural requirements (J.W. Carson Bridge/culverts)
- Municipal services/utilities, including Hydro One corridor
- Construction costs
- Construction staging

Phase 3 - Evaluation of Alternatives

The Alternative Designs were evaluated by the Project Team using the presented evaluation criteria. A copy of the detailed evaluation will be included in the Environmental Study Report.

Factors/ Criteria	Alt 1 – Widen East	Alt 2 – Widen West	Alt 3 – Widen Symmetrically
Transportation	Least Preferred	Least Preferred	Most Preferred
Natural Environment	Least Preferred	Most Preferred	Moderately Preferred
Socio-Economic	Moderately Preferred	Least Preferred	Moderately Preferred
Cultural Resources	Most Preferred	Least Preferred	Moderately Preferred
Engineering Considerations	Least Preferred	Most Preferred	Moderately Preferred
Overall Summary	**Least Preferred**	**Moderately Preferred**	**Most Preferred**

Phase 3 - Recommended Alternative

Widen Clarke Road from 2 to 4 lanes symmetrically, and accommodate the ultimate widening to 6 lanes.

- Reduces impacts to property and entrances and minimizes impacts to the cultural heritage resource;
- Reduces significant impacts to the utility corridor on the east side of Clarke Road;
- Reduces significant impacts to key natural heritage features;
- Suitable construction staging and meets geometric design requirements; and
- Ties into the Veteran's Memorial Parkway design.

Typical Cross Section of Four Lane Widening - Ultimate 100m Right of Way

Phase 3 - Evaluation of J.W.Carson Bridge Alternatives

Rehabilitate and Widen Existing Structure 	• Can maintain two lanes of traffic during construction • Will require new piers and abutments in 40 years • Not recommended by MNRF due to highest disruption to the natural environment • Lowest construction cost ($10.4M)	**Least Preferred**
Replace Existing Structure with a Clear Span Option 	• Long term closure of Clarke Road required during construction (over 1 year) • Avoids new pier in water • Requires specialized construction techniques • Requested by MNRF to minimize future disruptions to the natural environment • Highest construction cost ($21.0M)	**Moderately Preferred**
Replace Existing Structure with a Multi-Span Option 	• Can maintain two lanes of traffic during construction • New pier in water (potential to construct new pier within existing pier footprint) • Requested by MNRF to minimize future disruptions to the natural environment • Moderate construction cost ($13.2M)	**Most Preferred**

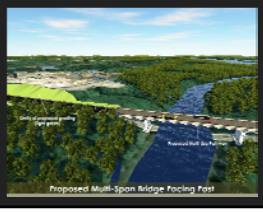
Key Features of the Recommended Design

The Recommended Alternative Design for Clarke Road includes the following features:

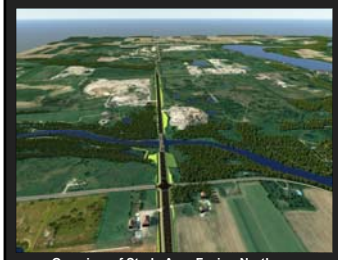
- 4 lane rural cross section with 3.75m lanes with a 1.0m centre median; 3.0m paved shoulders for cycling;
- A multi-use pathway along west side of Clarke Road will link the future Thames Valley Parkway to a controlled crossing of Clarke Road at the VMP/Clarke Road intersection. This pathway will also provide a linkage to Ted Early Park; and
- Maintains existing stop condition at the Kilally Road intersection and adds turning lanes at Fanshawe Park Road East.

The Recommended Alternative Bridge replacement option includes the following features:

- New 4 lane structure with substructure to accomodate 6 lanes; and
- 3.0m multi-use pathway on the west side.



Additional 3D Renderings



Overview of Study Area Facing North

Approaching Kilally Road Facing North

Potential Impacts and Proposed Mitigation

Strategies for mitigating proposed impacts were presented to the public and will be documented in the ESR. The potential impacts being mitigated include:

- Species at Risk
- Amphibian Breeding Habitat
- Valley seepage / hairy-fruited sedge
- Provincially Rare Plants
- Suitable Habitat for Species at Risk Bats
- Invasive Species
- Archaeological Resources
- Built Heritage Resources
- Property Impacts
- Noise
- Traffic

Next Steps

- Review, address and incorporate comments received on the recommended alternative design (August 10, 2018).
- Meet with stakeholders and agencies as required.
- Complete and finalize technical studies, including archaeological assessment, tree inventory, noise assessment
- Confirm the Preferred Alternative Design.
- Prepare an Environmental Study Report (ESR) to document the Class EA process.
- Present Draft ESR to the Ministry of Environment, Conservation and Parks (MOECP) and City Council.
- Finalize the ESR and make available for public review for a minimum of 30 days (Winter 2018).

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**AMENDMENTS TO THE TRAFFIC AND PARKING BY-LAW**

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the attached proposed by-laws (Appendix A) **BE INTRODUCED** at the Municipal Council meeting to be held on August 28, 2018, for the purpose of amending the Traffic and Parking By-law (PS-113).

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Civic Works Committee – April 17, 2018. Application by: The Corporation of the City of London - Street Renaming - Various Streets Across the City – Public Participation Meeting on April 17, 2018 Not Before 4:05 PM.

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of **Building a Sustainable City** by improving safety, traffic operations and residential parking needs in London's neighbourhoods.

BACKGROUND

The Traffic and Parking By-law (PS-113) requires amendments (Appendix A) to address traffic safety, operations and parking concerns. The following amendments are proposed:

1. **PS-113 Designation of Parking Spaces**

   A review of the Traffic and Parking By-law and the Highway Traffic Act (HTA) identified a discrepancy regarding the allowable sign heights for off-street accessible parking stalls.

Existing By-law	HTA	Recommended By-law Amendment
Minimum 1.2 m Maximum 1.8 m	Minimum 1.5m Maximum 2.5 m	Minimum 1.5 m Maximum 2.0 m
Measured to the bottom of the sign.	Measured to the centre of the sign.	Measured to the centre of the sign.

The recommended amendment ensures that the sign location measurements are within the limits specified in the HTA, while still addressing local experience with signage that is erected too high for drivers to observe.

An amendment is required to Designation of Parking Spaces 76. (1) for the above change.

2. <u>Street Renaming</u>

A report to Civic Works Committee April 17, 2018, identified some city street names were registered without a suffix. The report was passed which recommended to adding a suffix to the following streets:

- La Stradella, renamed La Stradella Gate;
- Middlewoods, renamed Middlewoods Drive;
- Tallwood, renamed Tallwood Circle; and
- The Birches, renamed The Birches Place.

Updates to various PS-113 Traffic & Parking By-law Schedules are required to reflect the renamed streets.

Amendments are required to Schedule 2 (No Parking), Schedule 6 (Limited Parking) and Schedule 11 (Yield Signs) for the above changes.

3. <u>Sherwood Forest Square Alterations</u>

Sherwood Forest Square is being reconstructed to accommodate a new multi-family development at 164 Sherwood Forest Square. Following construction, two-way traffic will be allowed on the north leg of the road, the lane bisecting the grass area will be removed and a pedestrian crossover (PXO) will be installed. Changes to the Traffic and Parking By-law are recommended to properly manage traffic.

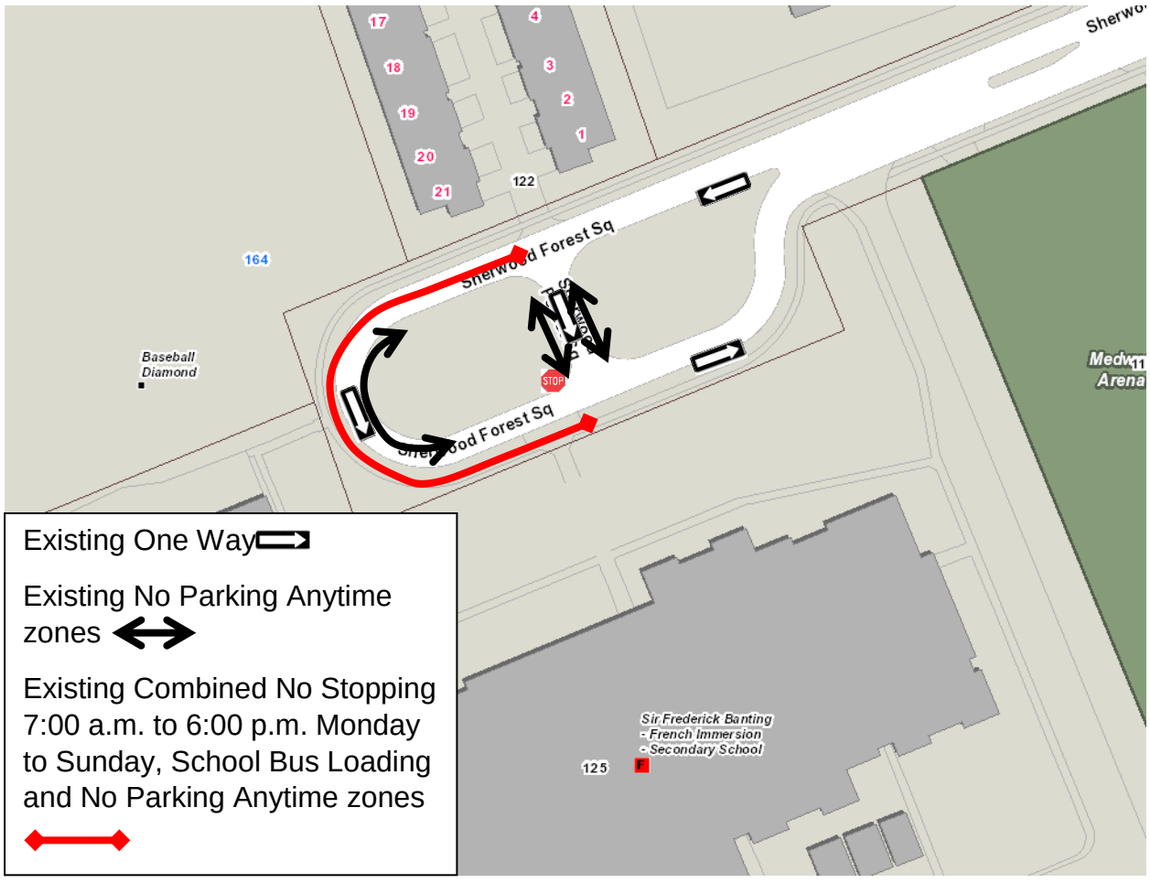


Figure 1: Sherwood Forest Square - Existing Traffic and Parking Regulations

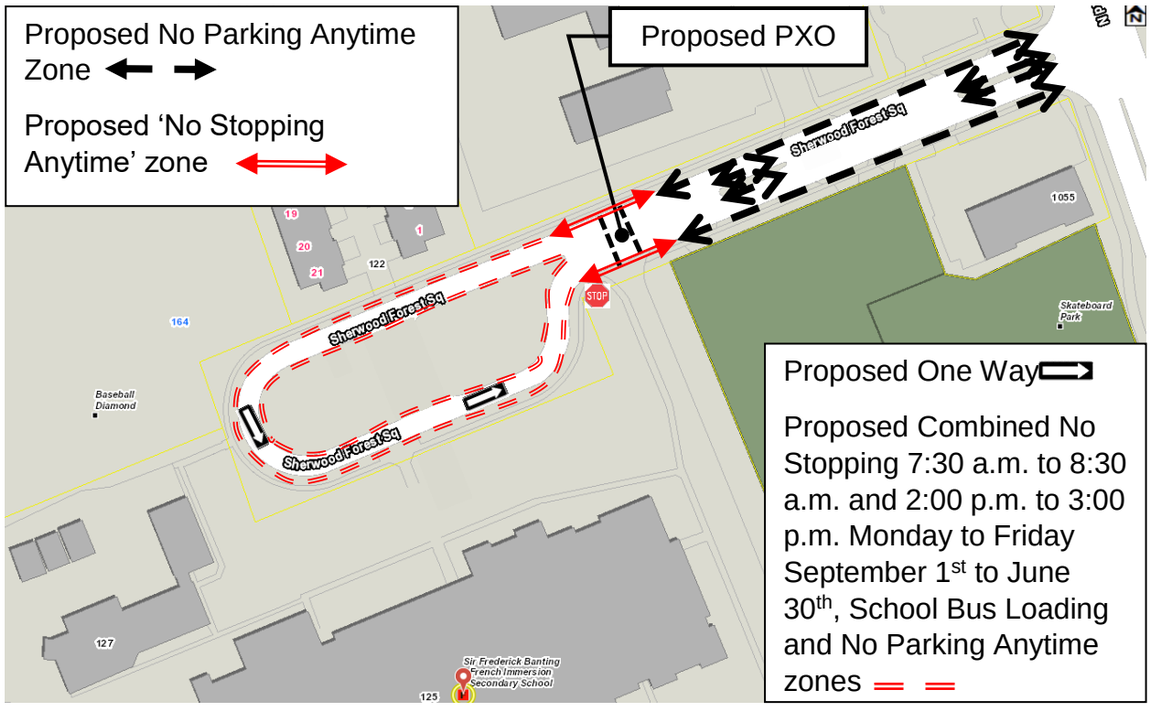


Figure 2: Sherwood Forest Square - Proposed Traffic and Parking Regulations

Amendments are required to Schedule 1 (No Stopping), Schedule 2 (No Parking), Schedule 10 (Stop Signs), Schedule 12 (One Way Streets), Schedule 13.1 (Pedestrian Crossovers), and Schedule 16 (School Bus Loading Zones) to address the above changes.

4. No Stopping

Due to safety concerns, it is recommended to replace the ‘No Parking Anytime’ zone on the south side of Shore Road from 207 m west of Riverbend Road to Riverbend Road with a ‘No Stopping Anytime’ zone. Vehicles stopping on the south side of Shore Road at St. Nicholas Catholic School to load or unload children while traffic is flowing east and west, has raised some concerns. The opposite side of Shore Road, (North side) is unrestricted parking which will allow for the the loading and unloading of passengers to take place.

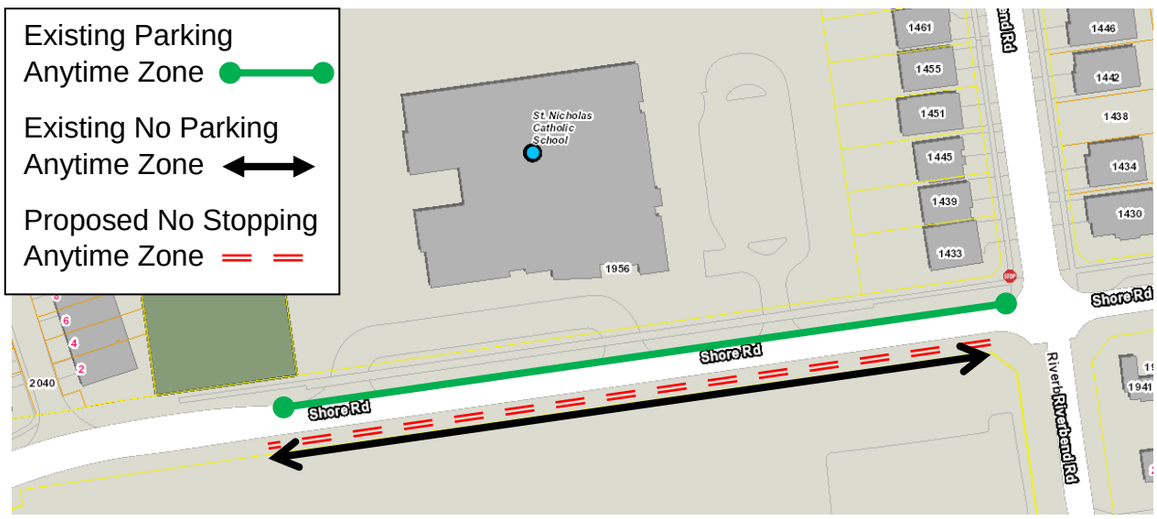


Figure 3: Shore Road

An amendment is required to Schedule 1 (No Stopping) to address the above change.

5. No Parking

a) London Transit

A review of the existing parking regulations on Banbury Road west of Deveron Crescent revealed that the existing London Transit stop on the south side of Banbury Road has a signed ‘No Parking Anytime’ zone; however, it was missing from Schedule 2 No Parking.

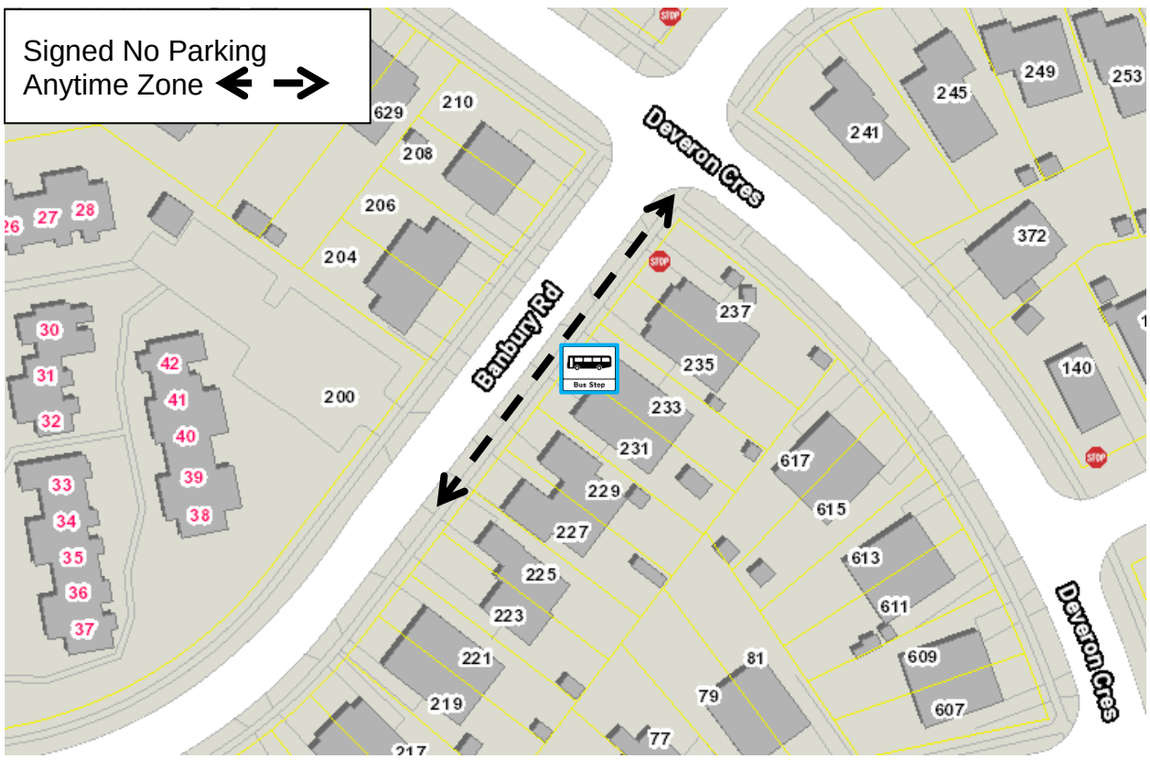


Figure 4: Banbury Road

b) Due to safety concerns, it is recommended that:

i. The existing ‘No Parking Anytime’ zone on the south side of Base Line Road E from Balderstone Avenue to Westminster Avenue be extended from 70 m west of Wellington Road to Westminster Avenue due to a left turn lane that was added to accommodate a new development on the south side of Base Line Road E west of Wellington Road;

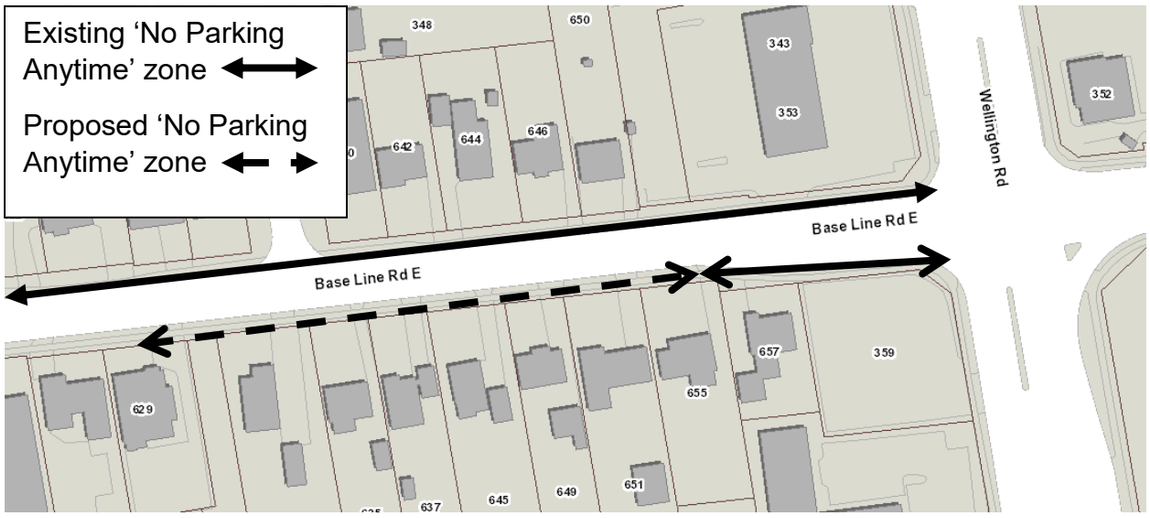


Figure 5: Base Line Road E

ii. Implement a ‘No Parking Anytime’ zone on the north side of Brock Lane from Brock Street to the east limit of Brock Lane due to a narrow road width of about 6.5 m which causes concerns for other road users when vehicles are parked on both sides of Brock Lane; and

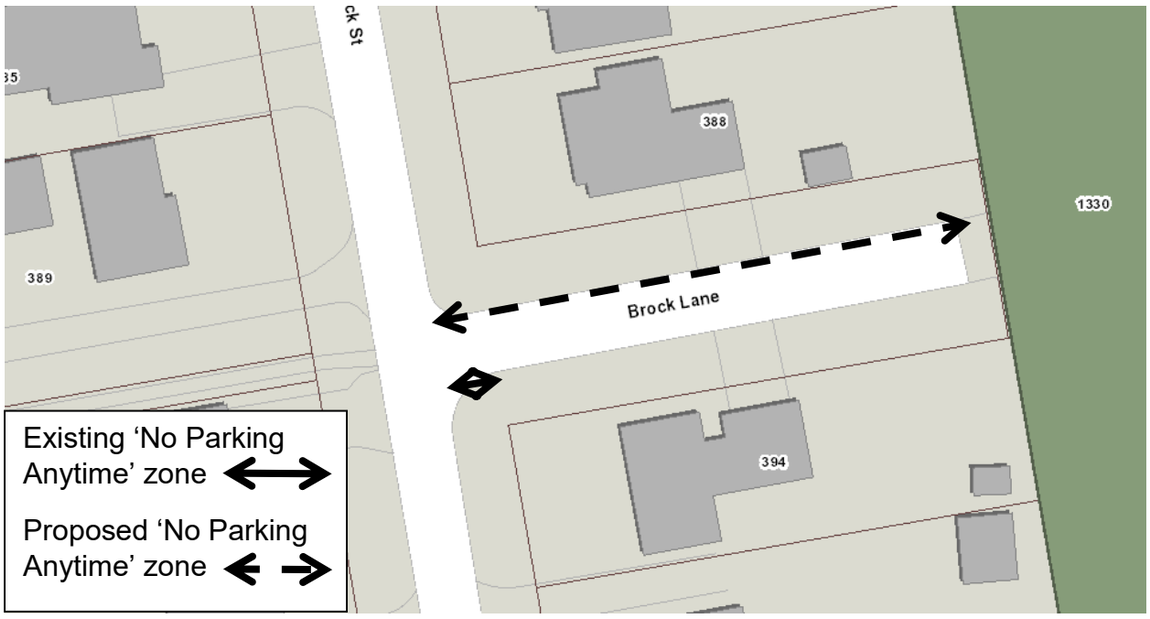


Figure 6: Brock Lane

iii. Elworthy Avenue as recently reconstructed which reduced the pavement width on the east leg from 7.5m to 6.0m. A ‘No Parking Anytime’ zone is recommended on the west and south side of Elworthy Avenue from Base Line Road E to 125 m north of Base Line Road E to mitigate concerns raised from road users when vehicles are parked on both sides of Elworthy Avenue.

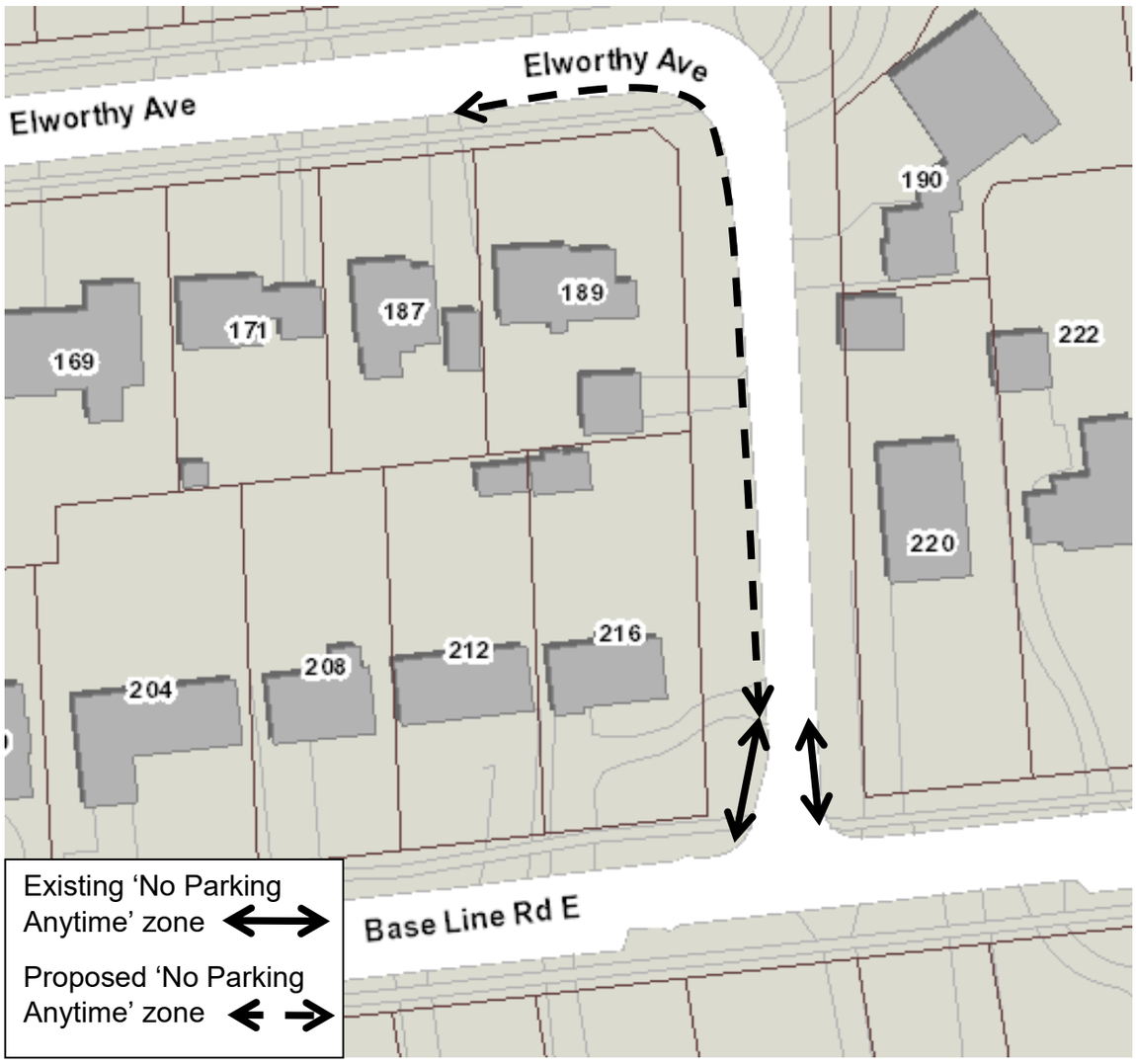


Figure 7: Elworthy Avenue

iv. At the request of local residents, a mail-back survey was sent to the property owners on Kerrigan Court where the majority of the respondents supported implementing a 'No Parking Anytime' zone on the south side of Kerrigan Court from 45 m west of Farnham Road to Farnham Road.

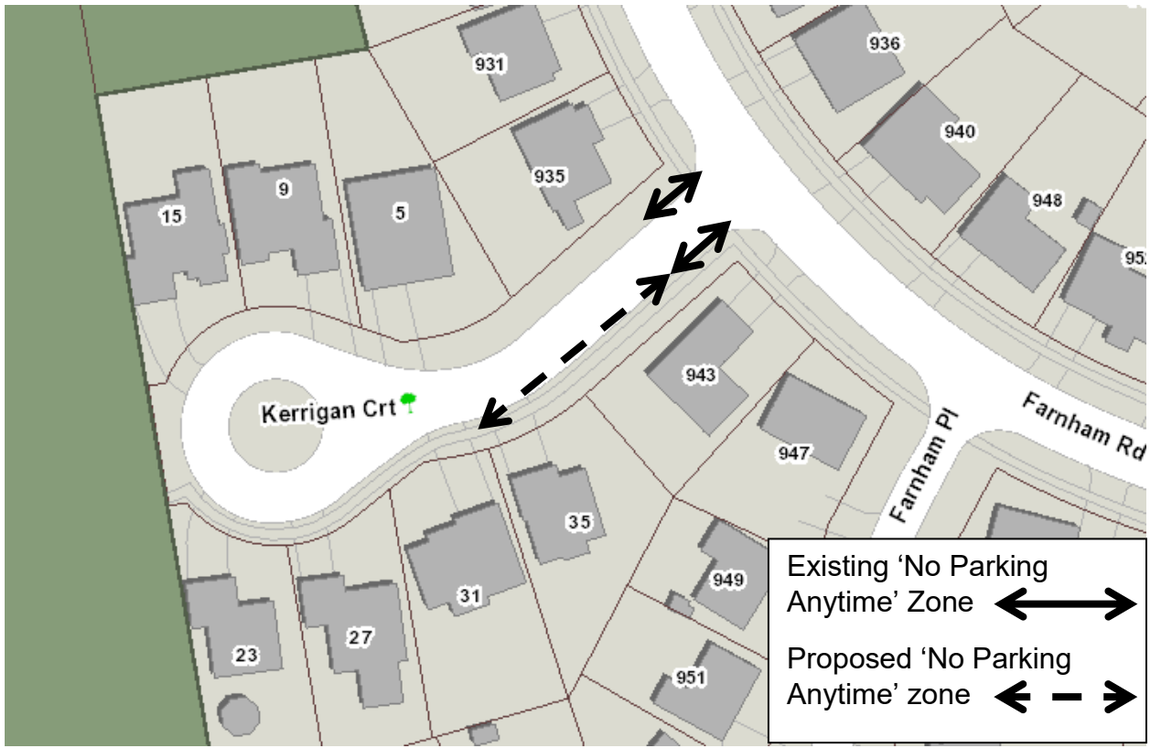


Figure 8: Kerrigan Court

c) As part of subdivision development, parking bays have been constructed on the following streets:

i. The north side of Evans Boulevard west of Green Gables. A 'No Parking Anytime' zone is recommended for the south side and north side outside the limits of the parking bay where the road is narrowed; and

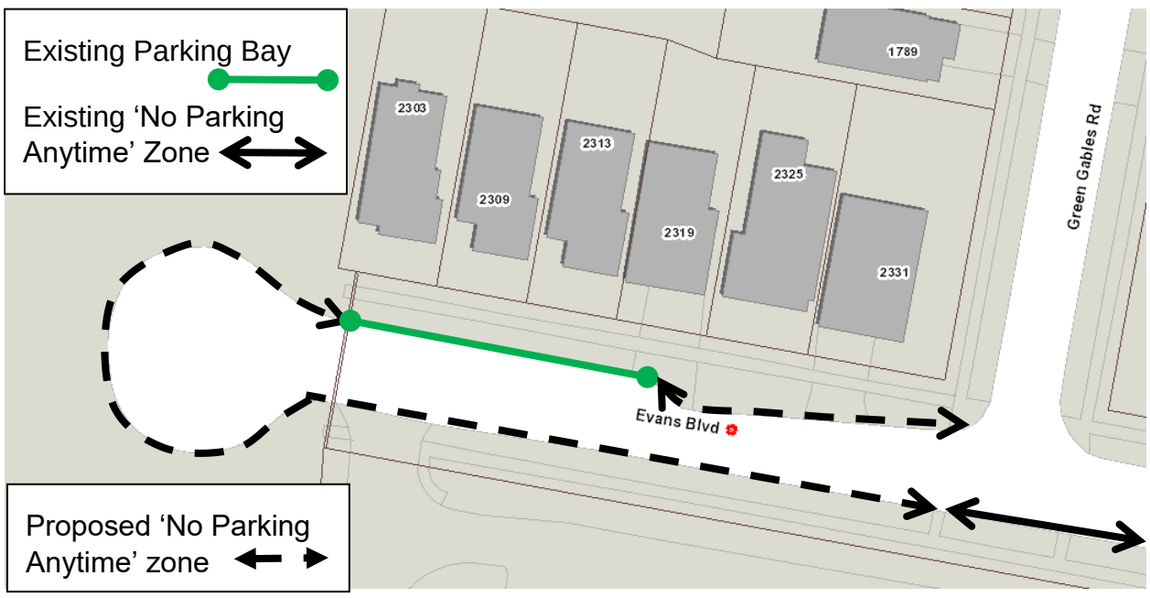


Figure 9: Evans Boulevard

ii. The south side of North Wenige Drive from Waterwheel Lane to Ballymote Avenue. A 'No Parking Anytime' zone is recommended for the north side opposite the parking bay

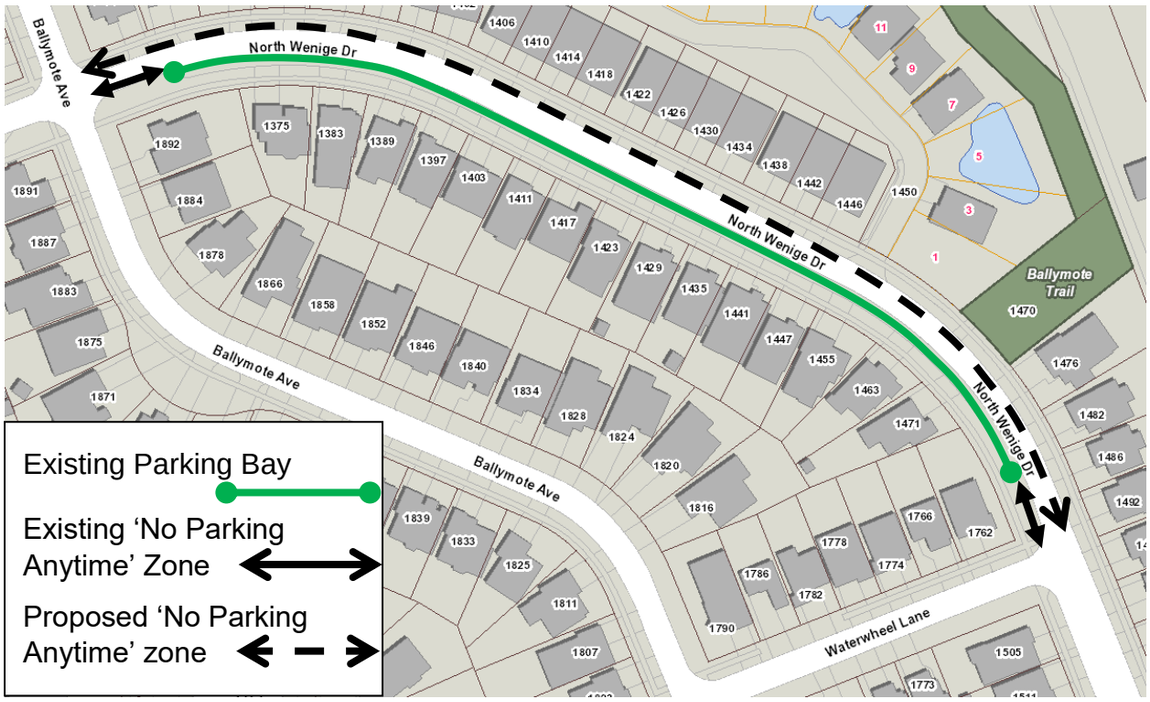


Figure 10: North Wenige Drive

Amendments are required to Schedule 2 (No Parking) and Schedule 3 (Bus stops) for the above changes.

6. Limited Parking

a) Anne Street Community Garden Parking

Staff have been requested to implement two-hour time limited parking and an accessible parking stall for the parking area of Anne Street Community Garden to ensure there is adequate parking for those visiting the garden.

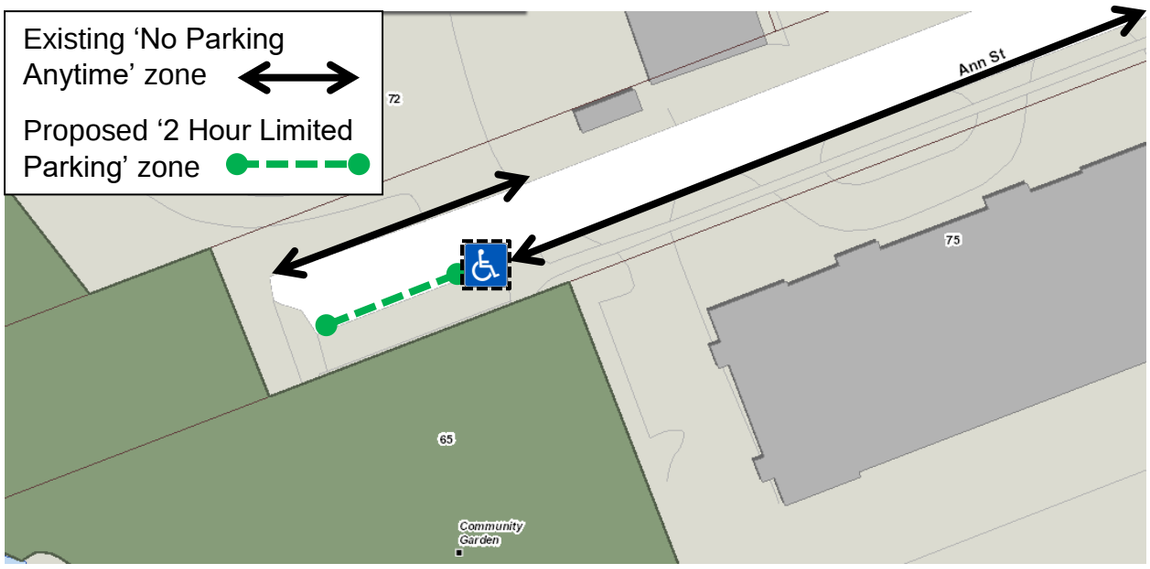


Figure 11: Ann Street

b) Wortley Road Parking

Staff have been requested to review the parking regulations on the east side of Wortley Road south of Bruce Street to maximize the on-street parking adjacent to the boulevard patio. A review was conducted and it is recommended to implement the following:

- A one-hour parking zone from 20 m south of Bruce Street to the south end of the patio; noting that parking beside the patio is prohibited from April 15 to October 15; and
- A one-hour accessible parking' zone with a 2 m hatched area immediately south of the patio.

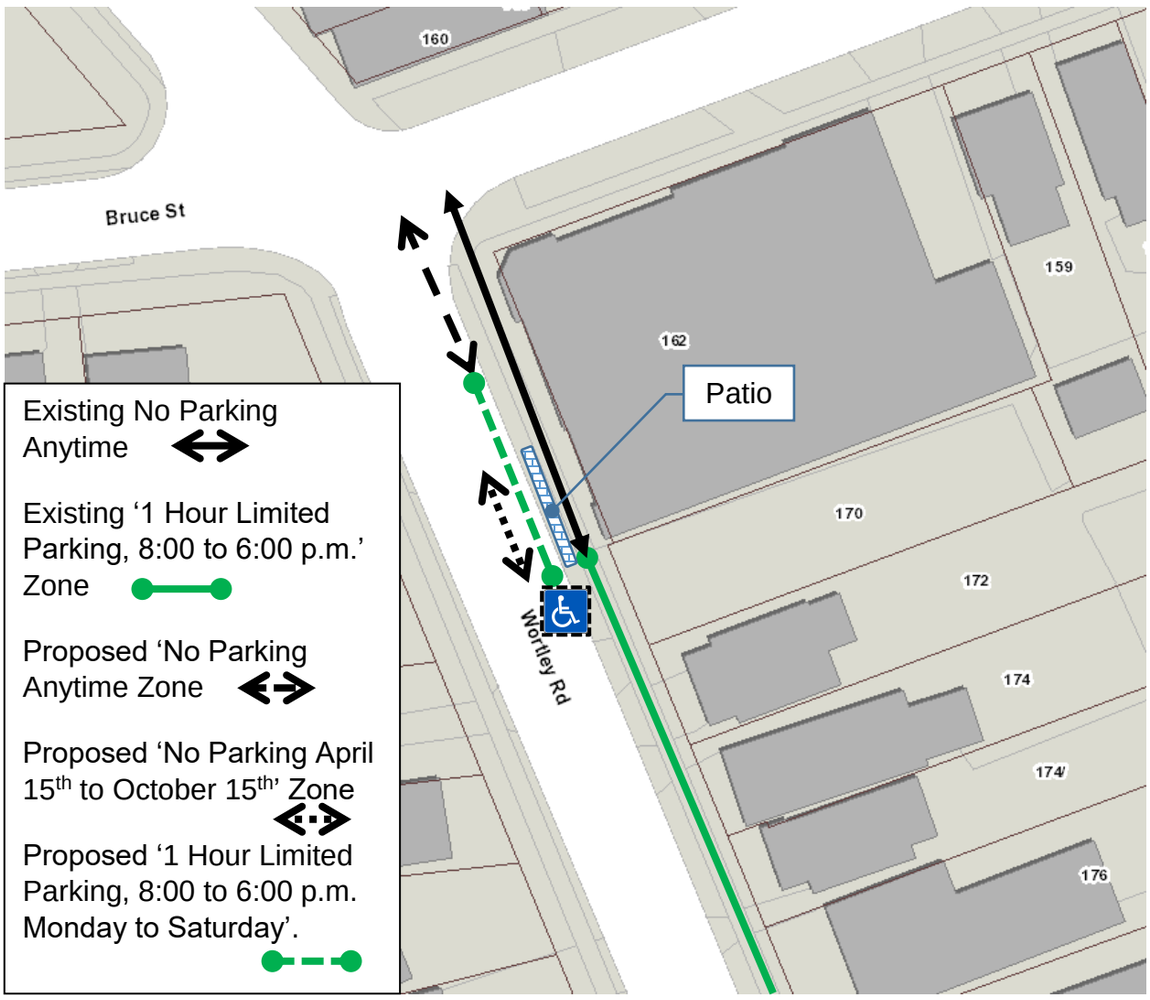


Figure 12: Wortley Road from Bruce Street to Elmwood Street

Amendments are required to Schedule 2 (No Parking), Schedule 6 (Limited Parking) and Schedule 27 (Designated Parking Spaces Disabled Persons) to address the above changes.

7. Prohibited Turns

The intersection of Darnley Boulevard and Cudmore Crescent was designed as a right-in/right-out due to its close proximity to Jackson Road. In order to address safety concerns with traffic entering and exiting Cudmore Crescent at Darnley Boulevard, it is recommended that U-Turns be prohibited at the west end of the island and that left-turns from Cudmore Crescent be prohibited.

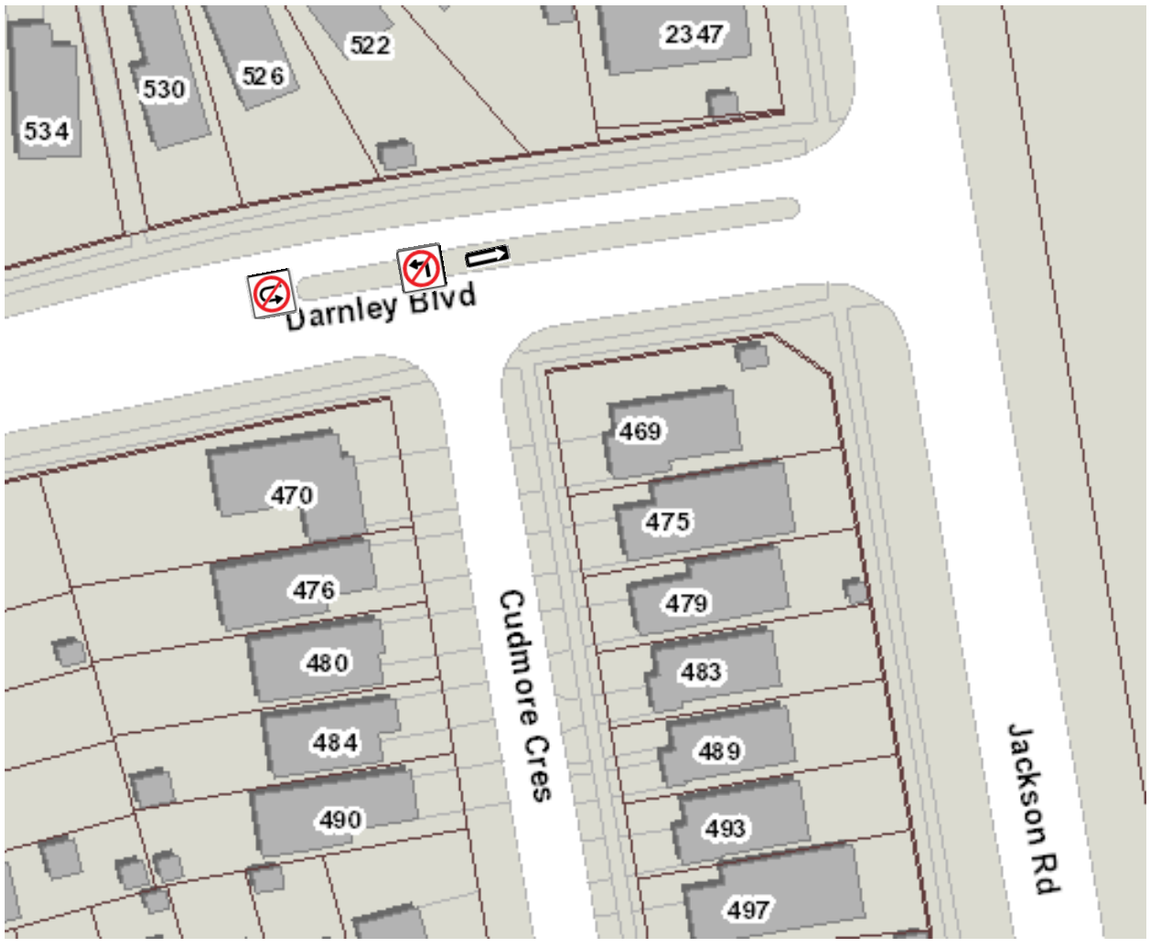


Figure 13: Darnley Boulevard

Amendments are required to Schedule 8 (Prohibited Turns) for the above changes.

8. Regulatory Signs

Due to operational and safety concerns, it is recommended to replace the existing yield sign with a stop sign at the following locations:

- Eastbound Ski Valley Crescent at Ski View Road; and
- Westbound Ski View Road at Ski Valley Crescent.

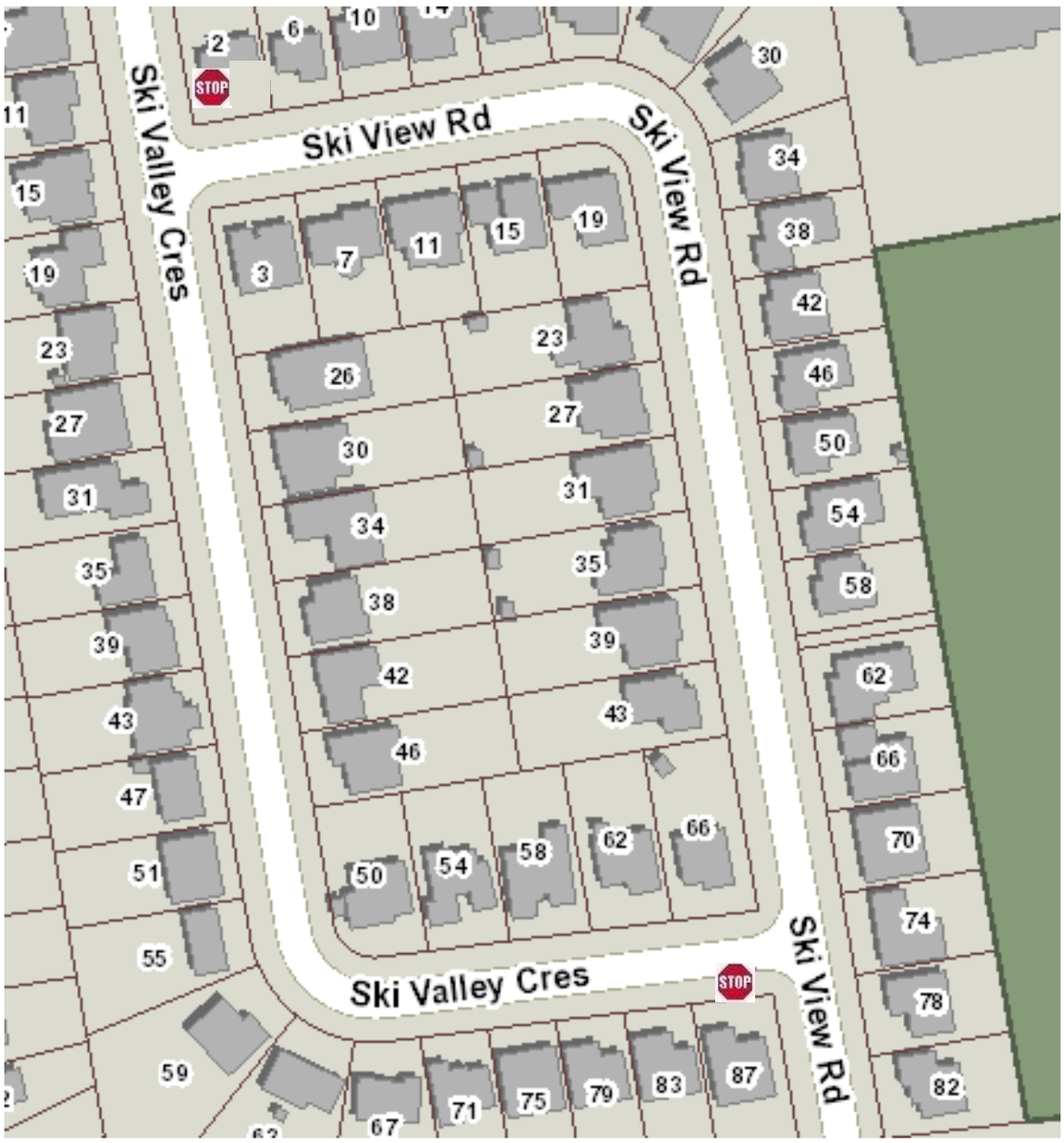


Figure 14: Ski Valley Crescent

Amendments are required to Schedule 10 (Stop Signs) and Schedule 11 (Yield Signs) to address the above changes.

9. Higher Speed Limits

The construction of Bradley Avenue West from Wonderland Road North to Wharncliffe Road South is completed, and it is recommended to implement a 60 km/h maximum speed limit from the west limit of Bradley Avenue West to Wharncliffe Road South, which is consistent with the posted speed assigned to other segments of Bradley Avenue.

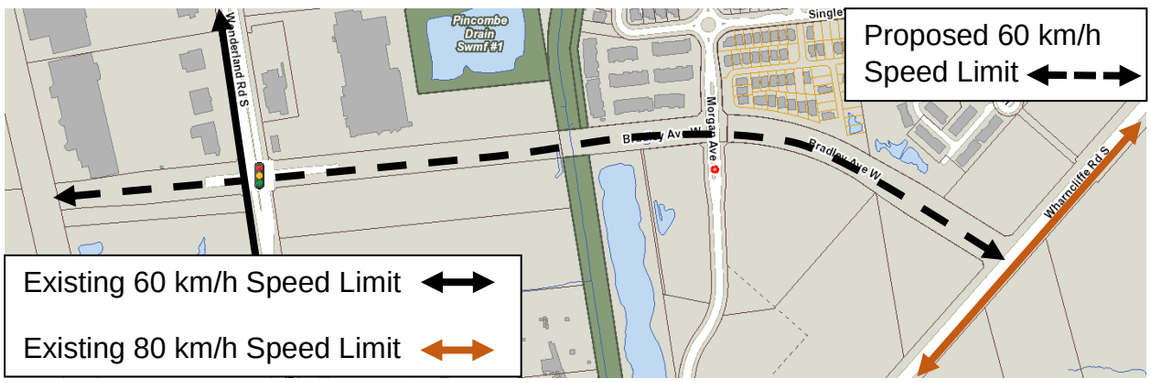


Figure 15: Bradley Avenue West

An amendment is required to Schedule 17 (Higher Speed Limits) to address the above change.

This report was prepared by Doug Bolton and Shane Maguire of the Roadway Lighting & Traffic Control Division.

PREPARED BY:	**RECOMMENDED BY:**
SHANE MAGUIRE, P. ENG. **DIVISION MANAGER,** **ROADWAY LIGHTING & TRAFFIC CONTROL**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR,** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**

\\FILE2\users-u\estr\Shared\Administration\COMMITTEE REPORTS\PS-113 Amendments\2018\2018-08-13\CWC August 13 2018 Council August 28 2018 (TRAFFIC PARKING BY-LAW AMENDMENTS) Ver. 4.docx
July 27, 2018/db
Attach: Appendix A: Proposed Traffic & Parking By-Law Amendments

cc. City Solicitor's Office
Parking Office

APPENDIX A

BY-LAW TO AMEND THE TRAFFIC & 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. <u>Designation of Parking Spaces</u>

By-law PS-113 is hereby amended by **deleting** the following:

76. (1) Where in a public parking lot or facility one or more parking spaces are intended for the sole use of a vehicle of a disabled person, the owner or operator of the public parking lot or facility shall identify each such parking space by erecting an official sign in such a manner that the official sign shall be clearly visible to the operator of any vehicle approaching or entering such parking space. The official sign shall be erected on a post secured in the ground or on a wall. The official sign shall be at the front of the parking space in the middle so that the bottom of the sign is between 1.2 m and 1.8 m above the parking lot surface.

By-law PS-113 is hereby amended by **adding** the following:

76 (1) Where in a public parking lot or facility one or more parking spaces are intended for the sole use of a vehicle of a disabled person, the owner or operator of the public parking lot or facility shall identify each such parking space by erecting an official sign in such a manner that the official sign shall be clearly visible to the operator of any vehicle approaching or entering such parking space. The official sign shall be erected on a post secured in the ground or on a wall. The official sign shall be at the front of the parking space in the middle so that the sign is between 1.5 m and 2.0 m when measuring from the grade to the centre of the sign.

2. <u>No Stopping</u>

Schedule 1 (No Stopping) of the By-law PS-113 is hereby amended by **deleting** the following row:

Sherwood Forest Square	North, West and South	A point 165 m west of Wonderland Road N	A point 235 m west of said street	7:00 am to 6:00 pm Monday to Friday

Schedule 1 (No Stopping) of the By-law PS-113 is hereby amended by **adding** the following rows:

Sherwood Forest Square	Both	A point 170 m west of Wonderland Road N	A point 130 m west of Wonderland Road N	Anytime
Sherwood Forest Square (north and south leg)	Both	A point 170 m west of Wonderland Road N	A point 260 m west of Wonderland Road N	7:30 a.m. to 8:30 a.m. and 2:00 p.m. to 3:00 p.m. Monday to Friday September 1st to June 30th
Shore Road	South	A point 205 m west of Riverbend Road	Riverbend Road	Anytime

3. <u>No Parking</u>

Schedule 2 (No Parking) of the By-law PS-113 is hereby amended by **deleting** the following rows:

Base Line Road E	South	A point 71 m west of Wellington Road	Westminster Avenue	Anytime
Evans Boulevard	South	Jackson Road	Green Gables Road	Anytime

Sherwood Forest Square that portion of a lane extending from Sherwood Forest Square (north leg) to Sherwood Forest Square (south leg)	Both	Sherwood Forest Square (north leg)	Sherwood Forest Square (south leg)	Anytime
Sherwood Forest Square (west leg)	East	Sherwood Forest Square (north leg)	Sherwood Forest Square (south leg)	Anytime
Tallwood	Both	A point 115 m north of Windermere Road	Windermere Road	8:00 am to 6:00 pm
Wortley Road	East	Bruce Street	A point 37 m south of Bruce Street	Anytime

Schedule 2 (No Parking) of the By-law PS-113 is hereby amended by **adding** the following rows:

Banbury Road	South	A point 75 m west of Deveron Crescent	Deveron Crescent	Anytime
Base Line Road E	South	A point 250 m west of Wellington Road	Westminster Avenue	Anytime
Brock Lane	North	Brock Street	East limit of Brock Lane	Anytime
Elworthy Ave (East Leg)	West and South	Base Line Road E	A point 125 m north of Base Line Road E	Anytime
Evans Boulevard (south leg)	North	A point 42 m west of Green Gable Road	Green Gable Road	Anytime
Evans Boulevard (south leg)	South, West and North	Jackson Road	A point 80 m west of Green Gable Road	Anytime

Kerrigan Court	South	A point 55 m west of Farnham Road	Farnham Road	Anytime
North Wenige Drive	North	A point 75 m north of Sunningdale Road E	Ballymote Avenue	Anytime
Sherwood Forest Square	Both	Sherwood Forest Square (south leg, east intersection)	Wonderland Road N	Anytime
Sherwood Forest Square (north leg)	Both	Sherwood Forest Square (south leg, west intersection)	Sherwood Forest Square (south leg, east intersection)	Anytime
Sherwood Forest (south leg	Both	Sherwood Forest Square (north leg, west intersection)	Sherwood Forest Square (north leg, east intersection)	Anytime
Sherwood Forest Square, the area that constitutes the traffic island	Both	A point 117 m west of Wonderland Road N	A point 95 m west of Wonderland Rd N	Anytime
Sherwood Forest Square, the area that constitutes the traffic island	Both	A point 41 m west of Wonderland Road N	A point 9 m west of Wonderland Rd N	Anytime
Tallwood Circle	Both	A point 115 m north of Windermere Road	Windermere Road	8:00 am to 6:00 pm
Wortley Road	East	A point 27 m South of Bruce Street	A point 37 m south of Bruce Street	Anytime April 15 to October 15

4. Bus Stops

Schedule 3 (Bus Stops) of the PS-113 By-law is hereby amended by **adding** the following row:

Banbury Road	South	A point 30 m west of Deveron Crescent	A point 50 m west of Deveron Crescent

5. Limited Parking

Schedule 6 (Limited Parking) of the By-law PS-113 is hereby amended by **deleting** the following rows:

Tallwood	Both	the north end of the streets to a point 115 m north of Windermere Road	8:00 a.m. to 4:00 p.m.	2 Hours Except Saturdays
Wortley Road	East	A point 37 m south of Bruce Street to Elmwood Avenue E	8:00 a.m. to 6:00 p.m.	1 Hour

Schedule 6 (Limited Parking) of the By-law PS-113 is hereby amended by **adding** the following rows:

Ann Street	South	A point 205 m west of Talbot Street to a point 185 m west of Talbot Street	8:00 am to 6:00 pm	2 Hours
Tallwood Circle	Both	A point 115 m north of Windermere Road to a point 383 m north of Windermere Road	8:00 a.m. to 4:00 p.m.	2 Hours Except Saturdays
Wortley Road	East	A point 20 m south of Bruce Street to Elmwood Avenue E	8:00 am to 6:00 pm	1 Hour

6. Prohibited Turns

Schedule 8 (Prohibited Turns) of the PS-111 By-law is hereby amended by **adding** the following rows:

Cudmore Crescent with Darnley Boulevard	Northbound	Left
Darnley Boulevard with Cudmore Crescent	Westbound	“U” Turn

7. <u>Stop Signs</u>

Schedule 10 (Stop Signs) of the PS-111 By-law is hereby amended by **adding** the following rows:

Eastbound	Brentwood Crescent	Middlewoods Drive
Westbound	Ranson Drive	Middlewoods Drive
Northbound	Sherwood Forest Square (south leg)	Sherwood Forest Square (north leg, east intersection)
Eastbound	Ski Valley Crescent	Ski View Road
Westbound	Ski Valley Road	Ski View Crescent

8. <u>Yield Signs</u>

Schedule 11 (Yield Signs) of the PS-111 By-law is hereby amended by **deleting** the following rows:

Eastbound	Ski Valley Crescent	Ski View Road
Westbound	Ski Valley Road	Ski View Crescent
Eastbound	Tallwood	Tallwood
Northbound	The Birches	Agincourt Gardens

Schedule 11 (Yield Signs) of the PS-111 By-law is hereby amended by **adding** the following rows:

Northbound	La Stradella Gate	Monterey Crescent
Southbound	La Stradella Gate	Scottsdale Street
Northbound	Sherwood Forest Square (south leg)	Sherwood Forest Square (north leg)
Eastbound	Tallwood Circle (south leg)	Tallwood Circle (east leg)
Northbound	The Birches	Agincourt Gardens

9. <u>One-Way Streets</u>

Schedule 12 (One-way) of the PS-113 By-law is hereby amended by **adding** the following row:

Sherwood Forest Square (south leg)	Sherwood Forest Square (north leg, west intersection)	Sherwood Forest Square (north leg, east intersection)	Northbound and Eastbound and Southbound

10. <u>Pedestrian Crossovers</u>

Schedule 13.1 (Pedestrian Crossovers) of the PS-113 By-law is hereby amended by **adding** the following rows:

Sherwood Forest Square	155 m west of Wonderland Rd N

11. <u>School Bus Loading Zones</u>

Schedule 16 (School Bus Loading Zones) of the PS-113 By-law is hereby amended by **deleting** the following row:

Sherwood Forest Square	North, West & South	A point 165 m west of Wonderland Road N	A point 235 m west of the said street

Schedule 16 (School Bus Loading Zones) of the PS-113 By-law is hereby amended by **adding** the following rows:

Sherwood Forest Square (north leg)	Both	Sherwood Forest Square (south leg, west intersection)	Sherwood Forest Square (south leg, east intersection)
Sherwood Forest Square (south leg)	Both	Sherwood Forest Square (north leg, west intersection)	Sherwood Forest Square (north leg, east intersection)

12. <u>Higher Speed Limits</u>

Schedule 17 (Higher Speed Limits) of the PS-113 By-law is hereby amended by **adding** the following row:

Bradley Avenue W	West limit	Wharncliffe Road S	60 km/h

13. <u>Designated Parking Spaces - Disabled Persons</u>

Schedule 27 (Designated Parking Spaces – Disabled Persons) of the PS-113 By-law is hereby amended by **adding** the following rows:

Ann Street	South	From a point 185 m west of Talbot Street to a point 180 m west of Talbot Street	2 Hours
Wortley Street	East	From a point 37m south of Bruce Street to a point 46 m south of Bruce Street	1 Hour

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

PASSED in Open Council on August 28, 2018

Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading – August 28, 2018
Second Reading – August 28, 2018
Third Reading – August 28, 2018

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**WASTEWATER OPERATIONS EQUIPMENT REPLACEMENT BUDGET AMENDMENT**

RECOMMENDATION

That on the recommendation of the Managing Director of Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to budget adjustments for the Wastewater Operations 2018 equipment replacement account:

a) Budget adjustment to increase 2018 funding for project ES508418 Replacement Equipment BE APPROVED in the total amount of $750,000 to fund ongoing repairs and replacement of equipment;

b) The financing for the projects BE APPROVED in accordance with the “Source of Financing Report” attached hereto as Appendix “A”.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Civic Works Committee – June 7, 2017 - Infrastructure Canada – Phase One Investments Clean Water & Wastewater Fund – Approved Projects

Civic Works Committee – October 4, 2016 – Infrastructure Canada Phase 1 Project Requests – Clean Water and Wastewater Fund

2016-2019 CORPORATE STRATEGIC PLAN ALIGNMENT

The following report supports the Strategic Plan through the strategic focus area of “Building a Sustainable City” by managing and improving water and wastewater infrastructure and services to provide robust infrastructure.

BACKGROUND

Purpose

The purpose of this report is to seek approval from Council to restore a portion of the 2018 equipment replacement account budget. A significant portion of this budget was reduced in 2017 and 2018 to fund the City’s share of the Clean Water and Wastewater Fund (CWWF) phase one projects.

DISCUSSION

Under CWWF Phase One, the City applied and received approval for 16 Wastewater projects in June 2017 totalling $34.5M. Through the CWWF program, the City finances 25% of the work while the other 75% of the cost is claimable from the fund. Since a large portion of the accepted CWWF Phase One projects included replacement of existing equipment at City wastewater treatment plants and pumping stations, the 2018 equipment replacement account was deemed an appropriate source to fund the projects. The 2018 ES5084 Replacement Equipment account was originally budgeted at $1,300,000 but was reduced through the contribution of $990,000 to CWWF projects. This budget reduction left $310,000 remaining to support wastewater treatment replacement equipment in 2018. In order to manage this shortfall, non-urgent work at the treatment plants was postponed and rescheduled to future years.

The ES5084 Replacement Equipment account is heavily relied upon by the Wastewater Operations Division to fund critical work at the City's 5 treatment plants. This funding supports the replacement or repair of process equipment, facility building systems, and the engineering costs to accomplish these tasks. A number of unanticipated repairs have been required in 2018 including two major equipment replacements. The revised budget estimate for 2018 considering spending to date and anticipated needs is $1,060,000, an increase of $750,000. This keeps the total account budget for 2018 below the originally budgeted amount of $1,300,000.

Financial Implications

The additional funding to support this budget increase will be drawn from the Sewage Works Reserve Fund. Mid-year financial monitoring is currently underway and the current forecast projects a revenue surplus that is larger than the increase required to support the replacement equipment budget increase. The year end monitoring report will recommend that the revenue surplus be contributed to the Sewage Works Reserve Fund. Therefore, it is anticipated based on these projections that supporting this replacement equipment budget increase will not have an adverse impact on the health of the Sewage Works Reserve Fund.

CONCLUSION

The City of London was approved for wastewater project funding of $34.5M under the CWWF Phase One program. In order to fully take advantage of the opportunities presented as a result of the CWWF program, the Wastewater Treatment Operation Division's ES5084-18 equipment replacement budget was reduced to obtain a portion of the City's share of the funding. It is now apparent that Wastewater Operations cannot meet its operational obligations with the significantly reduced budget. It is recommended that the equipment replacement account budget be increased to enable staff to meet operational needs for the remainder of 2018.

Acknowledgements

This report was prepared with assistance from Kirby Oudekerk, Wastewater Treatment Operations, and Debbie Gibson, Financial Business Administrator.

SUBMITTED BY:	REVIEWED & CONCURRED BY:
GEORDIE GAULD **DIVISION MANAGER,** **WASTEWATER TREATMENT OPERATIONS**	**SCOTT MATHERS, P.ENG., MPA** **DIRECTOR, WATER AND WASTEWATER**
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC **MANAGING DIRECTOR,** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**	

SGM/

Cc: Jason Davies, FP&P

APPENDIX 'A'

#18142

Chair and Members
Civic Works Committee

August 13, 2018
(Budget Amendment)

RE: Wastewater Operations Equipment Replacement
Capital Project ES508418 - Replacement Equipment Wastewater Treatment Plants

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FINANCE & CORPORATE SERVICES REPORT ON THE SOURCES OF FINANCING:

Finance & Corporate Services confirms that the cost of this project cannot be accommodated within the financing available for it in the Capital Works Budget and that, subject to the adoption of the recommendations of the Managing Director, Environmental & Engineering Services & City Engineer, the detailed source of financing for this project is:

ESTIMATED EXPENDITURES:		**Approved Budget**	**Additional Requirement**	1)	**Revised Budget**
Replace Vehicles & Equipment		$310,000	$750,000		$1,060,000
NET ESTIMATED EXPENDITURES		**$310,000**	**$750,000**		**$1,060,000**
SOURCES OF FINANCING:					
Capital Sewer Rates		$310,000			$310,000
Sewage Works Reserve Fund	1)		750,000		750,000
TOTAL FINANCING		**$310,000**	**$750,000**		**$1,060,000**

1) The additional funding will be drawn from the Sewage Works Reserve Fund. Mid-year financial monitoring projects a revenue surplus that is larger than the increase required. The year end monitoring report will recommend that the revenue surplus be contributed to the Sewage Works Reserve Fund so this additional requirement will not have an adverse impact on the health of the Fund.

JG

Anna Lisa Barbon
Managing Director, Corporate Services and
City Treasurer, Chief Financial Officer

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES & CITY ENGINEER**
SUBJECT:	**CONTRACT AWARD: TENDER RFT 18-73 WILTON GROVE ROAD SANITARY SEWER REPLACEMENT**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer, the following actions **BE TAKEN** with respect to the award of contracts for the replacement of the Wilton Grove Road Sanitary Sewer:

(a) the bid submitted by Bre-Ex Construction Inc., 247 Exeter Road, London, ON, N6L 1A5, at its tendered price of $4,597,122.40 excluding H.S.T., for the replacement of the Wilton Grove Road Sanitary Sewer, **BE ACCEPTED**; it being noted that the bid submitted by Bre-Ex Construction Inc., was the lowest of seven bids received and meets the City's specifications and requirements in all areas;

(b) Parsons Corporation **BE APPOINTED** Consulting Engineers to complete the construction administration and supervision for the Wilton Grove Road Sanitary Sewer Replacement in accordance with the estimate, on file, at an upset amount of $408,095.60 including 10% contingency, excluding H.S.T., and in accordance with Section 15.2 (g) of the City of London's Procurement of Goods and Services Policy;

(c) the financing for the project **BE APPROVED** in accordance with the "Sources of Financing Report" attached hereto as Appendix "A"

(d) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;

(e) the approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract; and,

(f) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

2017-10-24 Wilton Grove Road Improvements – Detailed Design and Tendering Appointment of Consulting Engineer

2015-19 STRATEGIC PLAN

The 2015 – 2019 Strategic Plan under Building a Sustainable City identifies Robust Infrastructure, more specifically to this report; 1B – Manage and improve our water, wastewater and stormwater infrastructure and services.

BACKGROUND

Purpose

This report recommends the award of tender RFT 18-73 for the reconstruction of the Wilton Grove Road Sanitary Sewer from Hubrey Road to Commerce Road (Appendix 'B' Location Map) to Bre-Ex Construction Inc. It also recommends that the existing contract with Parsons for engineering consulting services be extended to include contract administration and supervision.

Context

The sanitary sewer on Wilton Grove Road from Hubrey Road to Commerce Road is the outlet for approximately 260 hectares of industrial land, much of which is currently undeveloped. The existing sewer does not have the required capacity to service these undeveloped industrial lands. In order to service industrial growth in this south-east portion of the City, sanitary sewers upgrades are required.

DISCUSSION

Tender Summary

Five (5) contractors submitted tenders on the project with the tender prices listed below (excluding H.S.T.). Tenders for this project were opened on Monday July 16, 2018.

CONTRACTOR		TENDER PRICE SUBMITTED	CORRECTED TENDER PRICE
1.	Bre-Ex Construction Inc	$4,597,122.40	
2.	CH Excavating	$5,633,705.33	
3.	Blue-Con Construction	$5,676,182.05	
4.	Sierra Infrastructure Inc	$6,473,421.00	
5.	J-AAR Excavating Limited	$6,887,452.10	

All tenders have been checked and clerical errors have been corrected. Each contractor's qualifications have been reviewed by the Environmental and Engineering Services Area and the City's Consultant, Parsons.

The tender estimate prior to tender opening was $4,997,850.00 excluding H.S.T. Bre-Ex's low bid submission is competitive and is approximately $400,000 below the pre-tender estimate. All tenders and estimates shown above include a contingency allowance of $450,000.00, excluding H.S.T.

Project Schedule

Construction is scheduled to begin September 2018, take place during the winter months, and be completed by the end of Q2-2019. Construction activities will progress from the intersection of Hubrey Road and Wilton Grove Road and proceed approximately 1.3 kilometers east on Wilton Grove Road and terminate at Commerce Road. This project precedes a future road upgrade project on Wilton Grove Road that will be undertaken in 2019 east of Commerce Road to the City Limits.

Traffic Control

During construction, Wilton Grove Road will be open to local traffic only. Detours and a traffic management plan utilizing Green Valley Road to the south will be in place during this project. Businesses in the area will be kept apprised of activities that will have impact on property access. The contractor and the City's contract administration consultant will strive to maintain access to local businesses.

Servicing Opportunities

The project, once complete, will also provide the opportunity for properties on private systems to connect to the municipal sanitary system. Property owners within the project limits also have an opportunity to take advantage of the City's Private Drain Connection (PDC) program which allows existing privately serviced properties with septic systems to obtain a PDC at a subsidized cost. Sanitary Frontage Charges and PDC charges consistent with City By-Laws will apply if a property owner chooses to connect to the municipal sanitary sewer system.

Consulting Fees

In accordance with Section 15.2(g) of the Procurement of Goods and Services Policy, Civic Administration is recommending that Parsons be authorized to carry out the construction administration for the Wilton Grove Sanitary Sewer Replacement. Parsons has satisfactorily completed the detailed design for this project and is recommended for award of the balance of the work having satisfied all financial, reporting and other conditions required of the Policy. It is to the financial advantage of the City due to the fact that this consultant has specific knowledge of the project and have undertaken work for which duplication would be required if another firm were to be selected. City staff continue to foster a collaborative working relationship that focuses on achieving the lowest lifecycle cost and highest service performance for municipal infrastructure.

In addition, staff have reviewed the fee submissions in detail considering the hourly rates provided by each staff member. Staff have confirmed that hourly rates are consistent with those submitted through competitive processes. Staff also reviewed the time allocated to each project related task. Staff can confirm that the amount of time allocated to each project task is consistent with prior projects of a similar nature that have been awarded through a competitive process. In general, the assignment is found to be reasonable and in-line with those that would be expected through a competitive process.

A breakdown of Parsons consulting fees for the Wilton Grove Road Sanitary Sewer Replacement Project are given below:

Design Fee	Construction Administration Fee	Total Consulting Fees
$95,450.00	$408,095.60	$503,545.60

Financial Impact

Contract costs for the project are under budget and less than the cost estimate provided by the consultant prior to tendering.

No additional annual operating costs are anticipated as a result of this project.

CONCLUSIONS

Staff recommend that the construction contract for the Wilton Grove Road Sanitary Sewer from Hubrey Road to Commerce Road be awarded to Bre-Ex Construction Inc. It is further recommended that Parsons undertake the contract administration and inspection services during construction as it is in the best technical and financial interest of the City.

Acknowledgements

This report was prepared by Kevin Graham, P.Eng of the Wastewater and Drainage Engineering Division.

SUBMITTED BY:	**REVIEWED & CONCURRED BY:**
TOM COPELAND, P. ENG. **DIVISION MANAGER** **WASTEWATER AND DRAINAGE ENGINEERING**	**SCOTT MATHERS, MPA, P. ENG.** **DIRECTOR** **WATER & WASTEWATER**
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC **MANAGING DIRECTOR** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**	

August 1, 2018

Attach: Appendix A – Sources of Financing
Appendix B – Location Map

c.c. John Freeman, Manager, Purchasing and Supply
Mark Henderson, Director, Business Liaison
Gary McDonald, Budget Analyst
Alan Dunbar, Manager, Financial Planning and Policy
Jason Davies, Manager, Financial Planning and Policy
Parsons Corporation

APPENDIX 'A'

#18141

Chair and Members
Civic Works Committee

August 13, 2018
(Award Contract)

RE: Wilton Grove Road Sanitary Sewer Replacement - RFT 18-73
(Subledger WW180002)
Capital Project ID1057 - ILDS Sanitary Servicing Trunk and Internal Oversizing
Capital Project TS1490 - Wilton Grove Road Upgrades Commerce Road to City Limits
Bre-Ex Construction Inc. - $4,597,122.40 (excluding H.S.T.)
Parsons Corporation - $408,095.60 (excluding H.S.T.)

FINANCE & CORPORATE SERVICES REPORT ON THE SOURCES OF FINANCING:

Finance & Corporate Services confirms that the cost of this project can be accommodated within the financing available for it in the Capital Works Budget and that, subject to the adoption of the recommendations of the Managing Director, Environmental & Engineering Services & City Engineer, the detailed source of financing for this project is:

SUMMARY OF ESTIMATED EXPENDITURES	**Approved Budget**	**Revised Budget**	**Committed to Date**	**This Submission**	**Balance for Future Work**
ID1057-ILDS Sanitary Servicing Trunk and Internal Oversizing					
Engineering	$1,000,100	$1,000,100		$415,278	$584,822
Construction	5,000,000	5,000,000		4,169,232	830,768
	6,000,100	6,000,100	0	4,584,510	1,415,590
TS1490-Wilton Grove Road Upgrades Commerce Road to City Limits					
Engineering	806,120	806,120	477,218		328,902
Land Purchase	200,000	200,000			200,000
Construction		508,800		508,800	0
Relocate Utilities	662,800	154,000			154,000
	1,668,920	1,668,920	477,218	508,800	682,902
NET ESTIMATED EXPENDITURES	**$7,669,020**	**$7,669,020**	**$477,218**	**$5,093,310** 1)	**$2,098,492**
SUMMARY OF FINANCING:					
ID1057-ILDS Sanitary Servicing Trunk and Internal Oversizing					
Drawdown from City Services - Sewers Reserve Fund (Development Charges) 2)	$1,000,100	$1,000,100		$1,000,100	$0
Debenture Quota (Serviced through City Services Sewer R.F. (Development Charges)) 2&3a)	5,000,000	5,000,000		3,584,410	1,415,590
	6,000,100	6,000,100	0	4,584,510	1,415,590
TS1490-Wilton Grove Road Upgrades Commerce Road to City Limits					
Debenture By-law No. W.-5631-539 3b)	217,020	217,020	62,056	66,162	88,802
Drawdown from City Services - Roads Reserve Fund (Development Charges) 2)	1,451,900	1,451,900	415,162	442,638	594,100
					0
	1,668,920	1,668,920	477,218	508,800	682,902
TOTAL FINANCING	**$7,669,020**	**$7,669,020**	**$477,218**	**$5,093,310**	**$2,098,492**

1) **Financial Note: (CONSTRUCTION)**

	ID1057	**TS1490**	**Construction Total**
Contract Price	$4,097,122	$500,000	$4,597,122
Add: HST @13%	532,626	65,000	597,626
Total Contract Price Including Taxes	4,629,748	565,000	5,194,748
Less: HST Rebate	460,516	56,200	516,716
Net Contract Price	$4,169,232	$508,800	$4,678,032

Financial Note: (ENGINEERING)

	Engineering Total
Contract Price	$408,096
Add: HST @13%	53,052
Total Contract Price Including Taxes	461,148
Less: HST Rebate	45,870
Net Contract Price	$415,278
TOTAL CONSTRUCTION & ENGINEERING	$5,093,310

2) Development charges have been utilized in accordance with the underlying legislation and the Development Charges Background Studies completed in 2014.

Note to City Clerk:

3) Administration hereby certifies that the estimated amounts payable in respect of this project does not exceed the annual financial debt and obligation limit for the Municipality of Municipal Affairs in accordance with the provisions of Ontario Regulation 403/02 made under the Municipal Act, and accordingly the City Clerk is hereby requested to prepare and introduce the necessary authorizing by-laws.

a) An authorizing by-law should be drafted to secure debenture financing for project ID1057 - ILDS Sanitary Servicing Trunk and Internal Oversizing for the net amount to be debentured of $5,000,000.

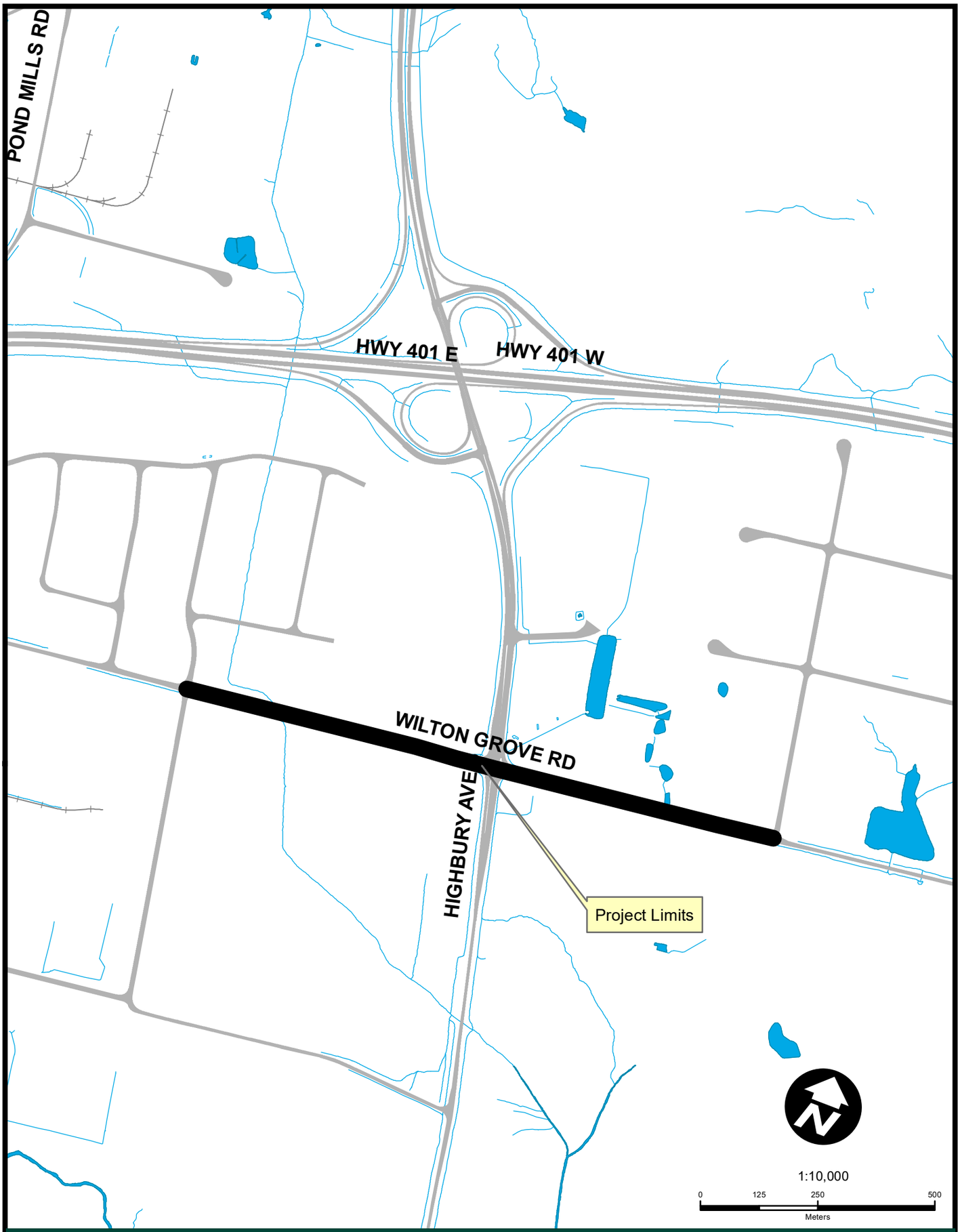
b) The City Clerk be authorized to increase Debenture By-law No. W.-5631-539 by $112,200 from $104,820 to $217,020.

4) No additional annual operating costs are anticipated as a result of this project.

JG

Jason Davies
Manager of Financial Planning & Policy

APPENDIX 'B'



WILTON GROVE ROAD SANITARY SEWER REPLACEMENT

Legend

- Project Limits
- Roads
- Water Body
- Railways

Map Produced by the Wastewater & Drainage Engineering Division

July 30 2018 JB

London
CANADA
300 Dufferin Avenue,
PO Box 5035
London, Ontario
N6A 4L9
www.London.ca

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**COMMISSIONERS ROAD WEST REALIGNMENT ENVIRONMENTAL STUDY REPORT**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Commissioners Road West Realignment Environmental Assessment:

(a) Commissioners Road West Realignment Municipal Class Environmental Study Report **BE ACCEPTED**;

(b) A Notice of Study Completion for the project **BE FILED** with the Municipal Clerk; and,

(c) The Environmental Study Report **BE PLACED** on the public record for a 30 day review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Civic Works Committee — June 19, 2012— London 2030 Transportation Master Plan
- Strategic Priorities and Policy Committee — June 23, 2014 —Approval of 2014 Development Charges By-Law and DC Background Study.
- Planning and Environment Committee — December 15, 2014 — Byron Pits Secondary Plan: Terms of Reference
- Civic Works Committee — November 3, 2015 — Environmental Assessment Appointment of Consulting Engineer
- Civic Works Committee — November 21, 2017 — Environmental Assessment Update

2015-2019 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by implementing and enhancing safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists through the realignment of an important east west arterial roadway.

BACKGROUND

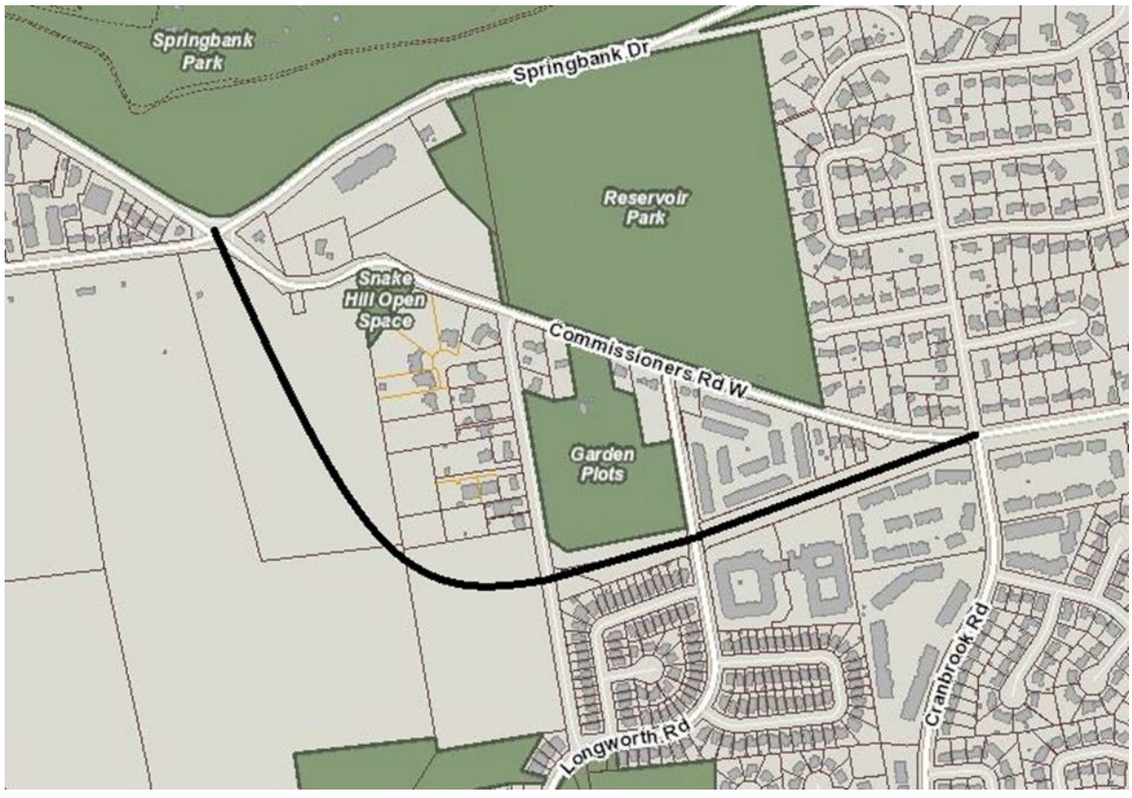
Purpose

This report provides Committee and Council with an overview of the Municipal Class Environmental Assessment (EA) for the Commissioners Road West Realignment from Byron Baseline Road/Springbank Drive to Cranbrook Road and seeks approval to finalize the study. The completed Environmental Study Report (ESR) documents the EA process undertaken for the Commissioners Road West Realignment Class EA.

Context

The Commissioners Road West Realignment Class EA Study was carried out in accordance with Schedule 'C' of the *Municipal Class Environmental Assessment* (Class EA) document (October 2000, amended 2007, 2011, and 2015). The Class EA process is approved under the *Ontario Environmental Assessment Act* and outlines the process whereby municipalities can comply with the requirements of the *Ontario Environmental Assessment Act*.

This Class EA study has satisfied the requirements of the *Ontario Environmental Assessment Act* by providing a comprehensive, environmentally sound planning process with public participation, and facilitating dialogue with parties representing a number of diverse interests. This ESR documents the decision making process carried out during the Commissioners Road Realignment Class EA study. See below for a map illustrating the study area.



Commissioners Road West Realignment EA Study Area

Within the study area, Commissioners Road West is a 1.2-kilometre two-lane arterial roadway extending from Springbank Drive/Byron Baseline Road in the west to Cranbrook Road in the east. The study area includes four intersections with Commissioners Road West: Springbank Drive/Byron Baseline Road, Cranbrook Road,

Crestwood Drive and Longworth Road. In the western portion of the study area, Commissioners Road West passes through “Snake Hill” (also referred to as “Reservoir Hill”), where the road experiences a steep westerly downgrade of approximately 11% approaching the intersection of Springbank Drive/Byron Baseline Road. The current posted speed along Commissioners Road West is 60 km/hr east of Longworth Road and 50 km/hr west of Longworth Road.

The environmental assessment identifies solutions to improve Commissioners Road West. The proposed new alignment of Commissioners Road will allow for improved operations and maintenance as well as better meet the mobility and accessibility needs of all users. The project will enable London Transit Commission service, emergency services and medium and heavy vehicles on Commissioners Road West. Currently, these services are limited by road geometrics.

The realignment of Commissioners Road West was first identified in the South-East Byron Area Study in 1992 and reaffirmed in the City’s Official Plan. More recently, the City’s Cycling Master Plan, The London Plan and the 2030 Transportation Master Plan show the importance of the realignment of Commissioners Road for all modes of transportation to better connect the City’s transportation network.

South-East Byron Area Study (1992)

In 1992, the Ontario Municipal Board approved the South-East Byron Area Study to recommend a development strategy within the study area of Byron Gravel Pits and land immediately surrounding the gravel pits. The purpose of the area study was to undertake a comprehensive evaluation of existing condition of the Byron Gravel Pits in relation to environmental issues, constraints and the most appropriate future land uses for the site. The Area Study also considered the future servicing requirements, transportation, and open space and environmental matters in determining the future land uses in the study area. The Area Study noted that the intersection of Commissioners Road West and Springbank Drive/Byron Baseline Road crosses at a non-standard horizontal and vertical alignment and the re-alignment of Commissioners Road was anticipated to require a portion of the pit land for the preferred alignment.

The London Plan

The London Plan, which encompasses the objectives and policies for the City’s short and long-term physical land development, indicates the realignment of Commissioners Road West as a part of the City’s future plans. The land use surrounding the realignment of Commissioners Road West is primarily low to medium density residential areas with open space on the north-west side and the Byron Gravel Pit on the south-west side of Commissioners Road West. Commissioners Road West is classified as a Civic Boulevard.

The Civic Boulevard street classification places a priority on pedestrian, cycle and transit movements, moves medium to high volumes of vehicular traffic, and encourages a high quality pedestrian realm and urban design.

2030 Transportation Master Plan (2013)

One of the five key initiatives of the TMP is a More Strategic Program of Road Network Improvements. There is a greater emphasis in this TMP on transit, active transportation and travel demand management. The City’s approach to defining the need for road network improvements has become more strategic. This approach recognizes the targets for reduced modal share for the automobile by 2030 and is consistent with the City’s expectation that transit and active transportation modal shares will increase

significantly from current levels. The City's approach also explicitly recognizes that road improvements will be required for different purposes.

The plan identifies the need to realign Commissioners Road West between Byron Baseline Road and Cranbrook Road and to widen the road to four through lanes within the next 15 to 20 years. The realignment of Commissioners Road West is intended to open an improved route for all users including public transit, school buses and emergency vehicles. The plan also recommends widening of Commissioners Road West (from Cranbrook Road to Wonderland Road) and Byron Baseline Road (from Commissioners Road West to Colonel Talbot Road).

Transportation Development Charges Background Study (2014)

The 2014 Transportation Development Charges (DC) Background Study recommended that this section of Commissioners Road West be realigned and constructed with four through lanes. Although the DC Background Study recommends that construction take place in approximately 15 to 20 years, the City elected to commence the EA study in 2015 in order to identify and protect the property requirements for development coordination with the proposed secondary plan and long-term implementation strategies.

Byron Gravel Pit Secondary Plan

The primary purpose of the Byron Gravel Pit Secondary Plan is to establish a vision for the Byron Gravel Pit that focuses on both the open space and recreational opportunities that the site provides, and also for the limited amount of urban development that may occur along the perimeter of the former gravel pit operations. To implement this vision, the Byron Gravel Pit Secondary Plan is to assist with the implementation of the vision by providing The London Plan policies for the successful planning and development within the area and provide for the co-ordination of development amongst multiple land owners.

DISCUSSION

Project Description

The ESR documents the process followed to determine the recommended undertaking and the environmentally significant aspects of the planning, design, and construction of the proposed improvements. It describes the problem being addressed, the existing social, natural and cultural environment considerations, planning and design alternatives that were considered and a description of the recommended alternative.

The ESR also identifies environmental effects and proposed mitigation measures, commitments to further work and consultation associated with the implementation of the project. A copy of the Executive Summary for the ESR is contained in Appendix A.

Planning and Analysis of Alternatives

Phase I of the Municipal Class EA (MCEA) process involved the identification of the problem and opportunity statement. It was determined that improvements are needed in this corridor to address existing and future road/traffic operational deficiencies, transit system efficiencies, road safety, and long-term vision of a street design that improves active transportation.

Phase 2 of the MCEA process involved identifying alternative solutions (planning

alternatives) to address the problem/opportunity statement.

The following five alternative solutions were examined in relation to the geometric deficiency on Commissioners Road West:

- Alternative 1 – Do Nothing
- Alternative 2A – Improve Existing Road Geometry: Vertical Road Profile
- Alternative 2B – Improve Existing Road Geometry: Horizontal Curvature
- Alternative 2C – Improve Existing Road Geometry: Road Profile and Curvature
- Alternative 3 – Realign Commissioners Road

Following consultation with agencies and the public, the preferred planning solution was selected as Alternative 3, realignment of Commissioners Road into a new corridor.

Key factors for Alternative Solution 3 being selected as the preferred planning solution include the following:

- Removes the existing challenges along the study corridor including the steep road grade by closing the existing Commissioners Road and providing a new alignment
- Improved safety for all road users (i.e. vehicles, pedestrians and cyclists)
- Improved access for emergency services with the removal of the steep grade
- Opportunity to provide transit service with the removal of the steep grade
- Improved road grade accommodates improved active-transportation facilities (i.e. multi-use path)
- Reserved corridor is sufficient to widen Commissioners Road West to 4-lanes when needed

Design Alternatives

Phase 3 of the MCEA process involves the development and evaluation of alternative design concepts. The main outcome in this phase of the study was developing road cross-sections and layout concepts for the recommended planning solution. Identification of the land requirements for this project was a key outcome to identify appropriate mitigation measures such as minimizing cultural, socio-economic and environmental impacts.

In addition to the City and National design guidelines, the following factors were considered in the development of alternative designs:

- In keeping with the design criteria, which keep the vertical and horizontal alignment within safe limits, design options through the gravel pit were constrained. The largest distance between centre lines of the most northerly and most southerly alignments was restricted to 55 metres due to proximity to the gravel pit and the hill adjacent to Crestwood Drive.
- An alignment that encroaches on the residential properties located on the hill would require a large amount of cut and directly affect these properties.
- An alignment far away from these properties and closer to the gravel pit would require a large amount of fill and the connection at the intersection of Commissioners Road and Byron Baseline Road would be at an increased skew.

After reviewing design options, three feasible alternative design concepts were developed using the design criteria. The description and illustration of alternative designs and variation in alignment are illustrated below.

Alternative Design 3.1 – Southerly Alignment

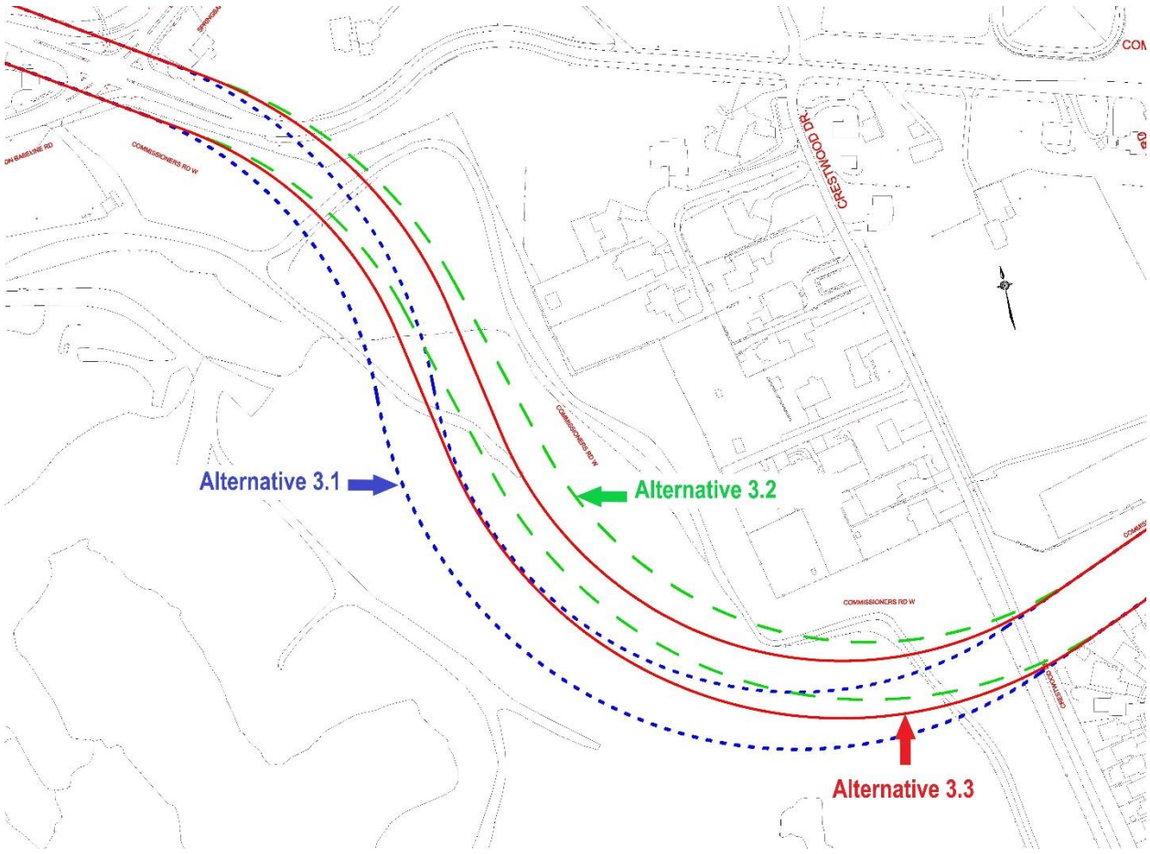
This corridor alignment is the furthest south and furthest away from the existing properties located on the hill on Crestwood Drive. This is the most southerly alignment feasible while still adhering to the design criteria.

Alternative Design 3.2 – Northerly Alignment

This alignment is the most northerly and closest to the hill on Crestwood Drive. This is the most northerly alignment feasible while meeting design criteria and not directly impacting the existing properties on top of the hill.

Alternative Design 3.3 – Middle Alignment

This alignment is in between alternative design 3.1 and 3.2.



Commissioners Road West Realignment Alternatives

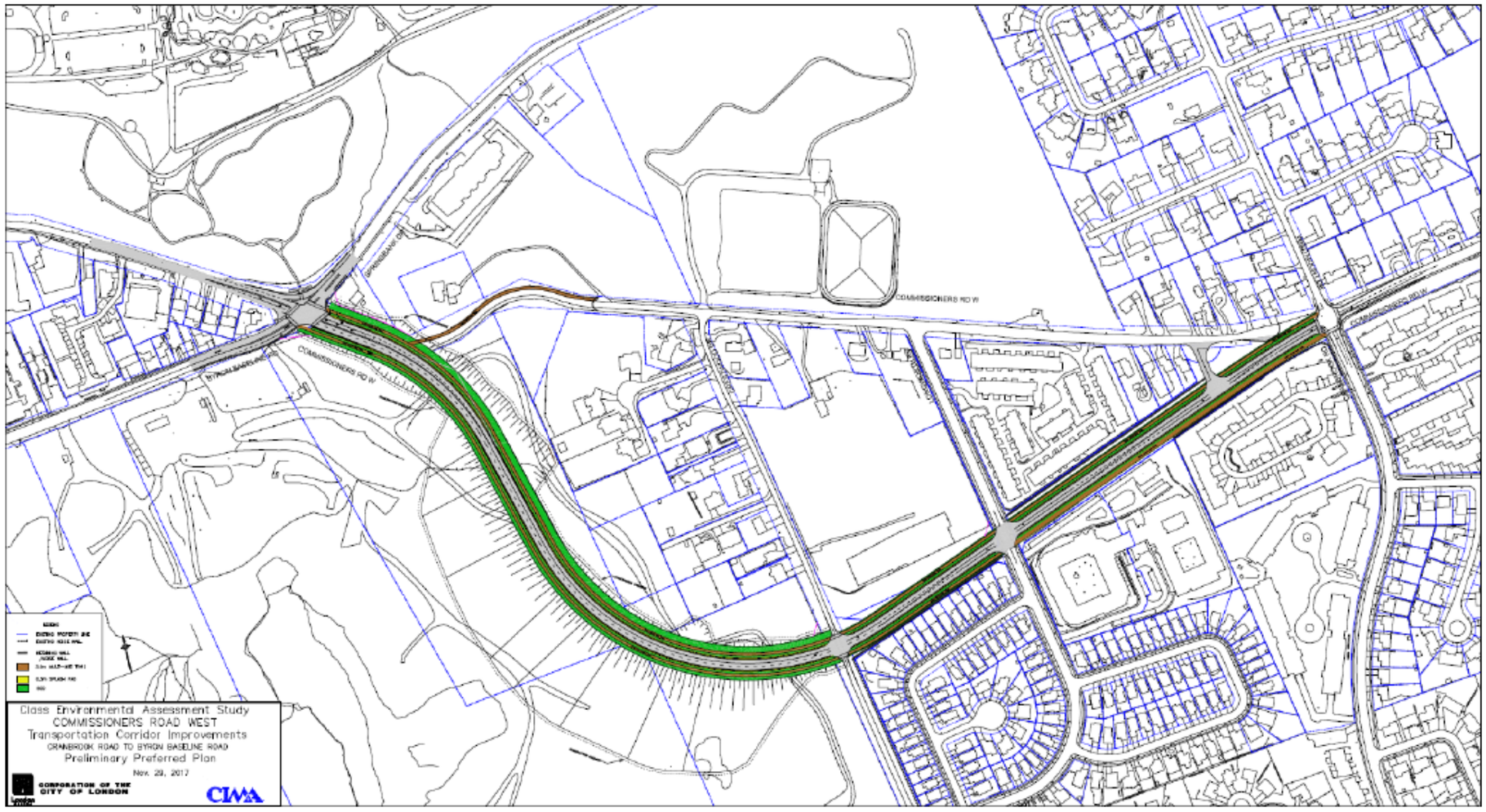
Recommended Alternative

Alternative Design 3.2, Northerly Alignment was selected as the preferred design that best addresses the project problem statement based on the detailed evaluation and feedback received from the public. Factors such as impact on areas of archaeological potential, built heritage resources, vegetation, property and municipal services and utilities as well as opportunities for streetscaping and active transportation were similar between all three alternative designs. Based on a virtual 3D representation of the design, it appeared that Alternative Design 3.2 presented the least amount of visual impact to the adjacent properties on the top of the hill on Crestwood Drive, as the alignment appeared to be hidden under the brow of the hill. Additionally, Alternative Design 3.2 presents the shortest road length, does not encroach on the existing water body at the base of the pit, and was the lowest cost due to the least amount of fill required. As a result of these factors, Alternative Design 3.2, Northerly Alignment was selected as the preferred design.

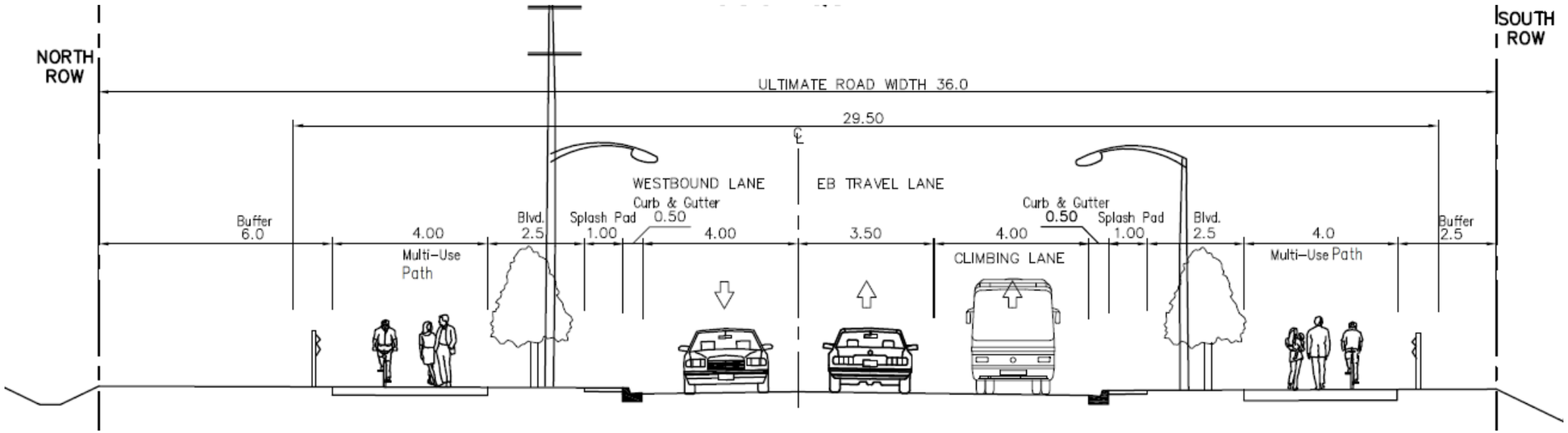
3D Representation: Commissioners Road West Realignment through Byron Gravel Pit (Crestwood Drive to Springbank Drive)

The design solution, as illustrated in the following figures, primarily involves the realignment of Commissioners Road through the Byron Gravel Pit with improved operations and increased functionality at the Springbank Drive and Cranbrook Road intersections. Improvements include constructing a cross-section with three lanes comprising of two lanes up the hill and one lane down through the Byron Gravel Pit. A new centre left-turn lane is proposed between Crestwood Drive and Cranbrook Road. The design includes standard lane widths, boulevards and multi-use paths on both sides to accommodate pedestrians and cyclists. Additional width is proposed for the multi-use paths to accommodate higher speed cyclist - pedestrian interactions considering the grades.

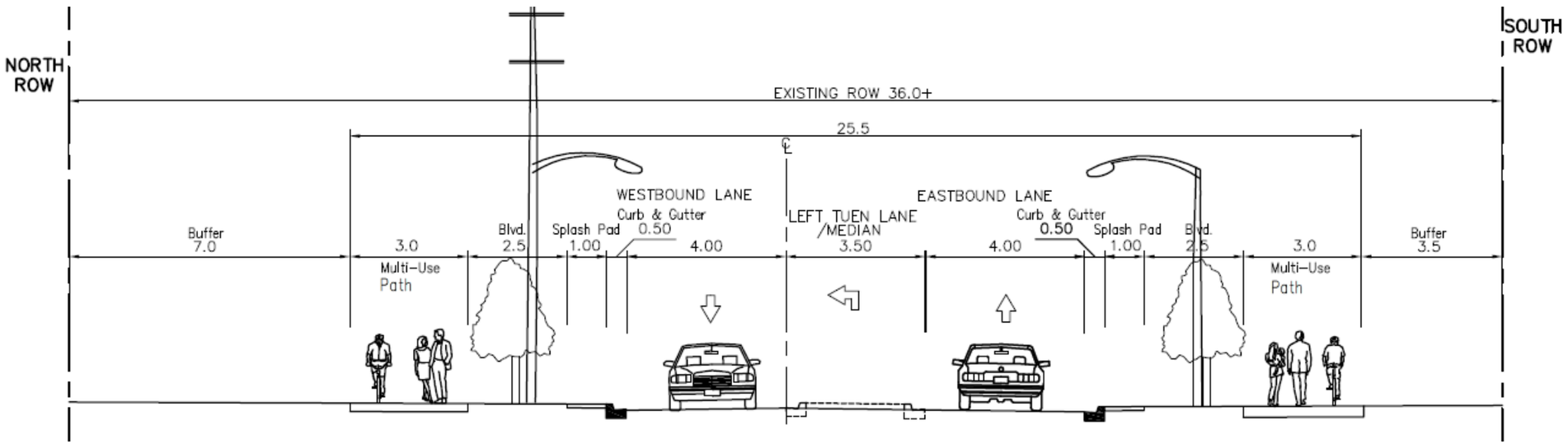
The right-of-way width will provide space for long-term future four-laning.



Commissioners Road West Realignment Preferred Alternative



Commissioners Road West Realignment Typical Cross Section through Pit



Commissioners Road West Realignment Proposed Typical Cross Section

Additional design components such as the intersection design and the approach to the Byron Baseline/Springbank Driver intersection were considered.

The intersection of Byron Baseline Road/Springbank Drive at Commissioners Road West is a skewed intersection and the connection to the new corridor was a design consideration. Two intersection designs were compared: a signalized intersection and a roundabout. Based on the intersection design evaluation, a signalized intersection was selected as the preferred intersection design. A signalized intersection was recommended due to a lower overall cost and less impact on adjacent land with half the amount of property required. The traffic operations and level of safety for the traffic signal option are acceptable.

An alternative westbound approach alignment to the Byron Baseline Road / Springbank Drive intersection was considered to reduce the wide angle between Byron Baseline Road and the east leg of Commissioners Road for safety improvements. However, it quickly became apparent that this realignment would shift the new alignment south causing a significant increase in fill and cost, and there were no significant advantages to doing so. Therefore, the additional alternative approach to the Byron Baseline/Springbank Drive intersection was not carried forward for more detailed assessment.

The following intersection recommendations from Crestwood Drive to Cranbrook Road are also proposed:

- Cranbrook Road/Westmount Drive – Close existing Commissioners Road West and connect to the realigned Commissioners Road West; and,
- Byron Baseline Road/Springbank Drive – extension of auxiliary lanes, and geometric design improvements.

The existing portion of existing Commissioners Road West corridor will continue to exist from west of Cranbrook Road to the top of Snake Hill (adjacent to access for MN929 Commissioners Road West) to service adjacent properties and Reservoir Park. Connections to the realigned Commisssioners Road will be provided through Crestwood Drive and Longworth Road.

Immediately west of the entrance to MN929 Commissioners Road West, Snake Hill will be closed to vehicular traffic and redesignated as a multi-use path (MUP). The Cultural Heritage Report prepared for this study has recommended that this MUP be configured to match the original alignment shown on 19th Century maps to reflect the heritage value of the hill. This MUP will provide a connection between Reservoir Park and Springbank Park.

Public and Agency Consultation

Consultation was a key component of this Class EA study in order to provide an opportunity for stakeholder groups and the public to gain an understanding of the study process and provide feedback. The consultation plan was organized around key study milestones, including the two Public Information Centres (PICs), stakeholder engagement and participation of technical review/regulatory agencies. The key stakeholders included residents, interested public, agencies, First Nations communities and those who may be affected by the project.

A Notice of Study Commencement was issued on April 11th, 2016 to inform the public of the initiation of the study and invite agency representatives to participate on the study's Technical Agency Committee (TAC). The study team received correspondence from the public and agencies indicating their interest in the study and requesting to be kept informed.

Public Information Centre (PIC) No.1 was held on March 30, 2017 to present the study, including information on existing conditions, alternative planning solutions, evaluation criteria and design considerations. It served as an opportunity for the public to review the project information, ask questions, and provide input to the members of the study team.

Public Information Centre No.2 was held on November 29, 2017 as an opportunity for attendees to review the impact of the road improvement options on the social, cultural, economic, and natural environments as well as review the preliminary preferred design.

Agencies and stakeholders were notified at study milestones and during specific phases of the study which required an information update pertaining to them. In addition to formal public events, the project team conducted in-person meeting with stakeholders and agencies. Three meetings with Lafarge representatives were conducted on, March 24th, September 18th, November 9th, 2017 and one meeting with the Upper Thames River Conservation Authority (UTRCA) was held on November 15th, 2017.

IMPLEMENTATION

Construction Staging

Currently, the project does not have a firm construction date due to uncertainty with the future land use and property availability. Construction is identified in the Development Charges Background Study near the 20-year horizon.

The construction is expected to take at least two years and possibly more to establish the fill area in the gravel pit depending on the construction technique used. Since much of the road construction will take place away from the current road network on a new alignment; traffic disruption will be minimized during construction.

Should the detail design for this project recommend incremental loading of the fill area in order to establish stability, a slight modification of this construction staging could involve incremental loading of the fill area in the gravel pit in advance of the main construction taking place over a number of years in order that the fill compacts before construction of the road. This staging of fill could commence following detail design once property and easements are obtained.

FINANCIAL CONSIDERATIONS

Preliminary Cost Estimates

The estimated total project cost associated with the proposed improvements, including engineering, roadway construction, fill material stormwater management, utility relocation, landscaping, traffic control, sanitary sewer and watermain improvements, landscaping, staging, and other project costs is approximately $19.5 M. It should be noted that this cost estimate does not include property costs based on the assumption that land may become available through development dedications considering the long-term implementation of the project. A detailed cost breakdown is shown below.

Construction Cost Estimate

Item	Estimated Cost ($)
Removals	1,600,000
Roadwork	12,300,000
Storm Sewers	700,000
Utility Relocation	400,000
Contingency (20%)	3,000,000
Engineering (10%)	1,500,000
TOTAL	**19,500,000**

The current Development Charges Background Study includes a cost estimate of $7.7 M. This estimate was based on limited project information and assumed pit restoration coordination, incremental fill placement and construction staging taking place over a number of years and potentially facilitated by development. The completion of this EA provides a much more informed cost estimate for this unique project that will be used to inform the 2019 Development Charge Background Study development and enable better long-term financial planning. The final cost of the project will be influenced by interaction with adjacent land-use development.

CONCLUSION

Improvements to the Commissioner Road West alignment are necessary to fulfill its necessary function in the transportation network. The realignment of Commissioners Road West has long been identified in City Official Plan. A Municipal Class Environmental Assessment (EA) was undertaken to confirm the detailed alignment to enable potential future land use changes to proceed in coordination with the required road realignment. The ESR is ready for final public review.

The Commissioners Road West Realignment Class EA Study was carried out in accordance with Schedule 'C' of the *Municipal Class Environmental Assessment* (Class EA) document (October 2000, amended 2007, 2011, and 2015). The Class EA process is approved under the *Ontario Environmental Assessment Act* and outlines the process whereby municipalities can comply with the requirements of the *Ontario Environmental Assessment Act*.

Five alternative planning solutions were developed and assessed against their ability to reasonably address the above problems and opportunities. Of the five alternatives, Alternative Solution 3.2 was selected as the preferred planning solution. Key factors for the selection include: improving safety, access for emergency services, active transportation, transit services and improved design standards.

Three alternative design concepts were developed and evaluated based on factors such as impact on areas of archaeological potential, built heritage resources, vegetation, property and municipal services and utilities as well as opportunities for streetscaping and active transportation. The impact on these factors were similar between all three alternative designs. However, based on a virtual 3D representation of the design, it appeared that Alternative Design 3.2 presented the least amount of visual impact to the adjacent properties on the top of the hill on Crestwood Drive as the alignment appeared to be hidden under the brow of the hill. Additionally, Alternative Design 3.2 presents the shortest road length and did not encroach on the existing water body at the base of the pit and was the lowest cost due to the least amount of fill required. Based on these factors, Alternative Design 3.2 was selected as the preferred design.

Consultation was a key component of this study. The Class EA was prepared with input from external agencies, utilities, emergency service providers, property owners in proximity to the study and First Nations.

Pending Council approval, a Notice of Study Completion will be filed, and the ESR will be placed on public record for a 30-day review period. Stakeholders and the public are encouraged to provide input and comments regarding the study during this time period. Should the public and stakeholders feel that the EA process has not been adequately addressed, they may request a Part II Order to the Minister of the Environment within the 30-day review period per MOECC instructions on their website.

Construction of Commissioners Road West Realignment EA is anticipated to begin in 15 to 20 years subject to property acquisition and approvals.

Acknowledgements

This report was prepared with the assistance of Ted Koza, P.Eng., Transportation Design Engineer and Josh Ackworth, C.E.T., Technologist II of the Transportation Planning & Design Division.

SUBMITTED BY:	**RECOMMENDED BY:**
DOUG MACRAE, P.ENG., MPA **DIVISION MANAGER** **TRANSPORTATION PLANNING & DESIGN**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**

Attachment: Appendix A – Environmental Study Report Executive Summary

cc. Stephen Keen, CIMA+

Executive Summary

1. Introduction

The City of London retained CIMA+ in 2016 to undertake an Environmental Assessment (EA) for the proposed realignment of Commissioners Road West. The realignment of Commissioners Road West was identified in the London 2030 Transportation Master Plan (TMP) which was approved by City Council in June 2012. The realignment was also shown in the City of London Official Plan 1992 and The London Plan. The Commissioners Road West realignment from Springbank Drive/Byron Baseline Road to Cranbrook Road study follows the Municipal Engineers Association (MEA) *Municipal Class Environmental Assessment* (October 2000, as amended in 2007, 2011 and 2015) process for a Schedule C project.

The proposed realignment is in accordance with the City's 2030 Transportation Master Plan (TMP), which identified the need to realign Commissioners Road West through the Byron Gravel Pit. The realignment is part of an overall plan that includes the reclamation of the Byron Gravel Pit. The recommendations of this study will contribute significantly to the development of the South-East Byron Secondary Plan, which will establish a vision for future development in the Byron Area. The construction of the realignment is not anticipated to commence for 15 to 20 years however, the study was initiated in order to establish a base road network for the Secondary Plan and establish preliminary property requirements.

Study Area of the Commissioners Road West Realignment EA

Within the study area, Commissioners Road West is a 1.2-kilometre two-lane arterial roadway extending from Springbank Drive/Byron Baseline Road in the West to Cranbrook Drive in the East. The study area includes four intersections with Commissioners Road West; Springbank Drive/Byron Baseline Road, Cranbrook Road, Crestwood Drive and Longworth Road. In the western portion of the study area, Commissioners Road West passes through "Snake Hill" (also referred to as "Reservoir Hill"), where the road experiences a very steep westerly downgrade of approximately 11% (approaching the intersection of Springbank Drive/Byron Baseline Road). The current posted speed along Commissioners Road West is 60 km/h east of Longworth Road and 50 km/h west of Longworth Road.

2. Planning context

The policy context is discussed in Chapter 2 of the ESR. The policy framework guides infrastructure and land use planning and strategic investment decisions to support City growth and transportation objectives.

The realignment of Commissioners Road West was first identified in the South-East Byron Area Study in 1992 and reaffirmed in the City of London Official Plan. The

realignment is shown in both plans as a part of the land use redevelopment of the Byron gravel pit. More recently, the City's Cycling Master Plan (2016), The London Plan and the 2030 Transportation Master Plan show the importance of the realignment of Commissioners Road West for all modes of transportation to better connect the City's transportation network.

3. Consultation

Consultation was a key component of the study in order to provide an opportunity for stakeholder groups and the public to gain an understanding of the study process and provide feedback at important stages in the Class EA process. The consultation plan was organized around key study milestones, including the two Public Information Centres (PICs), stakeholder engagement and participation of technical review/regulatory agencies at study milestones.

A mailing list was developed to notify potentially interested parties of opportunities for review and comment. The key stakeholders included residents, interested public, agencies, First Nations communities and those who may be affected by the project.

A Notice of Study Commencement was issued on April 11th, 2016 to inform the public of the study and invite agency representatives participate on the study's Technical Agency Committee (TAC).

Public Information Centre (PIC) No.1 was held on March 30, 2017 to present the study, including information on existing conditions, alternative planning solutions, evaluation criteria and design considerations. It served as opportunity for the public to review the project information, ask questions, and provide input to the members of the study team. The Notice of PIC No.1 was published in *The Londoner* on March 16th and March 23rd, 2017.

PIC No.2 was held on November 29, 2017 as an opportunity for attendees to review the impact of the road improvement options on the social, cultural, economic, and natural environments as well as the preliminary preferred design. The Notice of PIC No.2 published in *The Londoner* on November 16th and 23rd, 2017.

In addition to formal public events, the Project Team conducted numerous in-person meeting with the stakeholders and agencies. In particular, three meetings were held with the LaFarge Canada representatives, March 24th, September 18th, November 9th, 2017 and one meeting with the Upper Thames River Conservation Authority (UTRCA) on November 15th, 2017.

4. Identification of the problem

4.1. Existing Road Network

Within the study limits, Commissioners Road West and Byron Baseline Road /Springbank Drive are two-lane arterial roadways. All other roadways within the study area are local roads. East of the intersection with Byron Baseline Road/ Springbank Drive, Commissioners Road West passes through “Snake Hill”, where the roadway experiences a vertical grade of approximately 11%.

The existing roadway cross-section is partly rural and partly urban (curb and gutter present). The current posted speed limit on Commissioners Road West is 60 km/h east of Longworth Road and 50 km/h west of Longworth Road. The intersections at the two study-area termini are signalized, and there are two unsignalized intersections within the study area (Crestwood Drive and Longworth Road).

4.2. Traffic Operations and Safety Assessment

Commissioners Road West exhibits a steep road grade and very tight horizontal curves between Crestwood Drive and Byron Baseline Road/Springbank Drive. Commissioners Road West is classified as an urban arterial undivided roadway where the maximum gradient is recommended to be 6% while the current vertical grade for Snake Hill is approximately 11%. These existing conditions reduce traffic capacity, prevent provision of transit and emergency service within the study area, and inhibit active-transportation opportunities.

A significant number of collisions were observed on Snake Hill and at the intersection of Byron Baseline Road/ Springbank Drive and Commissioners Road West. Some of the contributing factors for the collisions may be slippery roads caused by loss of traction due to steep downgrade and sharp horizontal curvature, and short stopping sight distance. These conditions could be traffic safety concerns not only for vehicles but also vulnerable road users (i.e. pedestrians, cyclists and individuals with accessibility requirements).

Currently, this section of Commissioners Road West is not included in London Transit’s network due to the operational concerns. Similarly, emergency service vehicles’ operations are limited; especially in the winter season as this section of Commissioners Road West has high collision rates under wet and slippery conditions as discussed in the traffic and safety assessment.

4.3. Problem and Opportunity Statement

The steep vertical grade and sharp horizontal curves, contribute to safety concerns for all road users on this section of Commissioners Road West particularly in poor winter road conditions. Existing conditions reduce traffic capacity, prevent provision of transit and emergency service within the study area, and inhibit active-transportation opportunities. Additional problems within the study area include:

- Most recreational cyclists have hard time riding on an 11% incline.
- Ontario's Accessibility Design Standards generally require that pedestrian pathways have a grade of 5% or less.
- Emergency service vehicles may reduce their respective operations.
- Transit services limitation.
- Heavy vehicles are advised against using Snake Hill as a truck route.

The operator of the Byron Gravel Pit has indicated that pit operations are nearing completion, and this creates the opportunity to provide a realigned Commissioners Road West with a road geometry suitable for all road users. The realignment of Commissioners Road West is an opportunity to:

- Improve road safety for all users
- Achieve integrated land-use planning (including the Byron Gravel Pit)
- Connect the park system
- Create new pathways and pocket parks
- Enhance landscaping

5. Alternative Planning Solutions

Transportation planning solutions were developed and assessed against their ability to reasonably address the problems and opportunities identified in the study area. The following five alternatives solutions are examined in relation to the geometric deficiency on Commissioners Road West:

Alternative Solution 1 – Do Nothing

Leave Commissioners Road West in an as-is state.

Alternative Solution 2A – Improve Existing Road Geometry: Vertical Road Profile

Reconstruction of the existing Commissioners Road West to improve the vertical curvature deficiencies to meet the design standard of 6%. The steep grade may be avoided by modifying the roadway's profile between Springbank Drive and Westmount Drive.

Alternative Solution 2B – Improve Existing Road Geometry: Horizontal Curvature

Reconstruction of the existing Commissioners Road West to improve the horizontal deficiencies of reverse curves, just east of Springbank Drive, which currently have radii of 80 metres. Solutions to improve the horizontal deficiencies will mitigate the stopping sight distance (SSD). However, designing under the required design standards, the minimum horizontal curve radius will increase, result in significant property impacts.

Alternative Solution 2C – Improve Existing Road Geometry: Road Profile and Curvature

Combining horizontal and vertical alignment modifications would be preferred over Solution 2A and 2B to eliminate sight-distance restrictions at the horizontal curves. A minimum curve radius of 170 metres and 6% maximum grade would be required. The impacts noted for Alternative Solution 2A and 2B combined would be incurred for this option.

Alternative Solution 3 – Realign Commissioners Road West

Following the closure of the Byron gravel pit, relocation of Commissioners Road West southerly to a new corridor may be feasible. The maximum road grade of a new Commissioners Road West would be less than 6%, (i.e. within the City's design standards). There are several alternate solutions for the roadway alignment and configuration of the local road network.

6. Preferred Planning Solution

Phases 1 and 2 of the Class EA including the alternative solutions, were presented to agencies and the public for review and input at a Technical Agencies Committee (TAC) meeting and Public Information Centre #1 (PIC). Overall, in discussion with those in attendance at the PIC, there was an overall favourable response to Alternative Solution 3.

Key factors for Alternative Solution 3 being selected as the preferred planning solution include the following:

- Removes the existing steep road grade by closing the existing Commissioners Road West and providing a new alignment
- Improved safety for all road users (i.e. vehicles, pedestrians and cyclist)
- Improved access for emergency services
- Opportunity to provide transit service
- Integration of Commissioner Road into London's Road Network and conforms to the City's planning policies (i.e. The London Plan)
- Improved road grade accommodates improved active-transportation facilities (i.e. multi-use path)
- Reserved corridor is sufficient to widen Commissioners Road West to 4-lanes

Cost was not considered as a principle factor in the determination of the preferred solution. The overall benefits mentioned above were found to outweigh cost in the evaluation process.

Following consultation with agencies and the public, the preferred planning solution is recommended as **Alternative 3, realignment of Commissioners Road West into a new corridor**.

7. Alternative Design Concepts

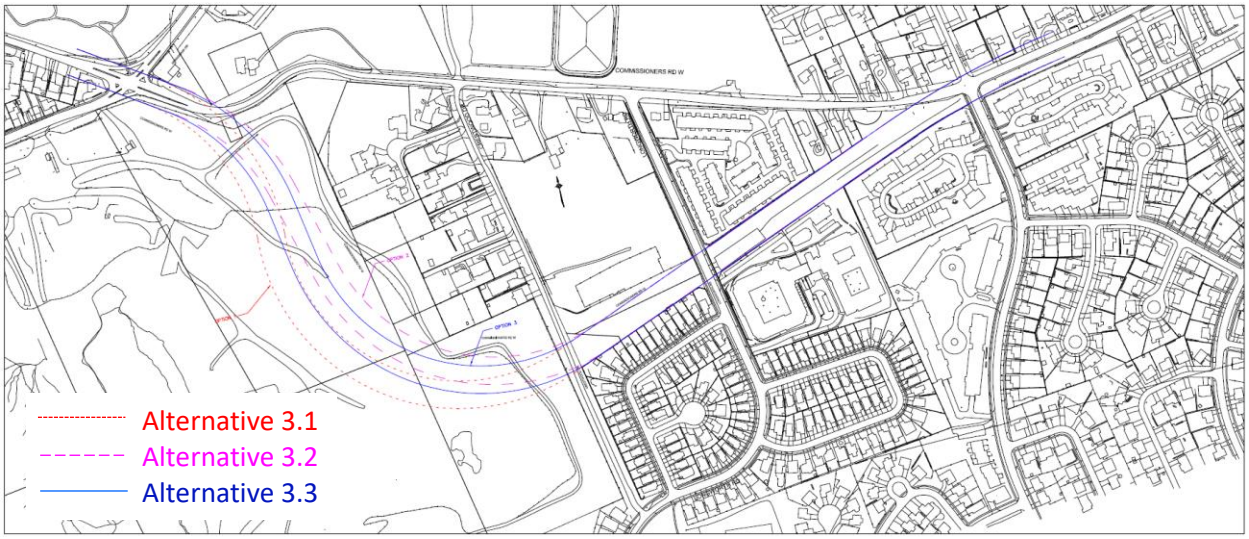
Phase 3 of the Class EA process includes the development and evaluation of alternative designs based on the preferred planning solution. The design criteria utilized in the development of the alternative designs are shown in **Section 7.1** of the body of the report.

In addition to the design criteria discussed above, the following factors were considered in the development of alternative designs:

- In keeping with the design criteria which keep the vertical and horizontal alignment within safe limits, design options through the pit were constrained. The largest distance between centre lines of the most northerly and most southerly alignments was restricted to 55 metres due to proximity to the pit and the hill adjacent to Crestwood Drive.
- An alignment that encroaches on the residential properties located on the hill would require a large amount of cut and directly affect these properties.

- An alignment far away from these properties and closer to the pit would require a large amount of fill and the connection at the intersection of Commissioners Road West and Byron Baseline Road would increase the skewed angle.

After reviewing design options, previously prepared in 1992 (and others by the City), three feasible alternative designs were developed using the design criteria. The alternative designs and variation in alignment are illustrated below.



Alternative Design 3.1 – Southerly Alignment

This corridor alignment is the furthest south and furthest away from the existing properties located on the hill on Crestwood Drive. This is the most southerly alignment feasible while still adhering to the design criteria.

Alternative Design 3.2 – Northerly Alignment

This alignment is the most northerly and closest to the hill on Crestwood Drive. This is the most northerly alignment feasible while meeting design criteria and not directly impacting the existing properties on top of the hill.

Alternative Design 3.3 – Middle Alignment

This alignment is in between alternative design 1 and 2.

8. Preferred Design

Alternative Design 3.2, Northerly Alignment was selected as the preferred design that best addresses the project problem statement based on the detailed evaluation and feedback received from the public. Factors such as impact on areas of archaeological potential, built heritage resources, vegetation, property and municipal services and

utilities as well as opportunities for streetscaping and active transportation were similar between all three Alternative Designs. Alternative Design 3.2 presents the shortest road length, does not encroach on a source of groundwater, and the cost was lowest due to the least amount of fill required. Additionally, based on a virtual 3D representation of the design, it appeared that Alternative Design 3.2 presented the least amount of visual impact to the adjacent properties on the top of the hill on Crestwood Drive as the alignment appeared to be hidden under the brow of the hill.

9. Additional Design Components

9.1. Approach to Byron Baseline Road

An alternative westbound approach alignment to the Byron Baseline/Springbank intersection was considered in conjunction with each of the main alignment options 3.1, 3.2, and 3.3. The approach angle was modified to reduce the wide angle between Byron Baseline Road and the east leg of Commissioners Road West. This could potentially improve safety while modifying the angle between legs closer to the desired 90 degrees.

However, it became apparent that this realignment would bring the new alignment south causing a significant increase in fill and therefore cost yet there were no significant advantages to doing so. Therefore, additional alternative approach to the Byron Baseline/Springbank Intersection was not carried forward for more detailed assessment.

9.2. Intersection Design Alternatives

The intersection of Byron Baseline Road/Springbank Drive at Commissioners Road West is a skewed intersection and the connection to the new corridor was a design consideration. Roundabout design was considered to reduce intersection related collisions and increase traffic capacity. Two intersection designs were compared; a signalized intersection and a roundabout.

Based on the intersection design evaluation, a signalized intersection was selected as the preferred intersection design. A signalized intersection was recommended due to a lower overall cost and less impact on adjacent land with half the amount of property required and the traffic operations and level of safety for the traffic signal option were considered acceptable.

10. Preliminary Property Requirements

The City of London will require residential and commercial properties to establish the new ROW within the study limits. The final extent of acquisition at these locations and associated mitigation will be the subject of negotiations with the property owners. Seven (7) properties within the ROW are impacted and the property required is shown below.

Table 1: Property Required within the Right of Way of the Study Limits

Property	Property Required (m^2)
940 Springbank Road	55
982 Springbank Road	440
1044 Byron Baseline Road	365
1030 Byron Baseline Road	14815
West of 549 Crestwood Drive (CON 1 PT LOT 41 RP 33R10286 - PART 1)	630
581 Crestwood Drive	7135

11. Project timing and Construction Staging

Currently, the project does not have a firm construction date with a likely completion date at least 15 to 20 years away unless the project is promoted in the City's budget.

The construction is expected to take at least two years and possibly more for establishing the fill area in the pit depending on the construction technique used. Since much of the road construction will take place away from the current road network on a new alignment; traffic disruption will be minimized during construction. Suggested construction staging is split into three stages:

- Stage 1: West of Byron Baseline Road to correct the sight line issues
- Stage 2: Between Cranbrook Road and the start of the pit (just west of Crestwood Drive)
- Stage 3: The gravel pit

Should the detail design for this project recommend incremental loading of the fill area in order to establish stability, a slight modification of this construction staging could involve incremental loading of the fill area in the pit in advance of the main construction taking place over a number of years in order that the fill compacts before construction of

the road – this could commence following detail design once property and easements are obtained.

12. Preliminary Project Costs

The estimated total project cost associated with the proposed improvements, including engineering, roadway construction, stormwater management, utility relocation, landscaping, traffic control, sanitary sewer and watermain improvements, landscaping, staging, and other project costs is approximately $19.5 M. It should be noted that this cost estimate does not include property costs. A detailed cost breakdown can be found in **Section 8.13** of the report.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET, & SOLID WASTE**
SUBJECT:	**COMMUNITY ENERGY ACTION PLAN – STATUS UPDATE**

RECOMMENDATION

That, on the recommendation of the Director of Environment, Fleet and Solid Waste, this update on the status of Community Energy Action Plan activities **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

The relevant reports that can be found at www.london.ca under City Hall (Meetings) is:

- Report to the August 29, 2017 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Status Update (Agenda Item #11)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of climate change mitigation, climate change adaptation, related environmental issues and the need for a more sustainable city in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan). Specifically, the Community Energy Action Plan (CEAP), addresses all four Areas of Focus, at one level or another, as follows:

Strengthening Our Community
- Healthy, safe, and accessible city

Building a Sustainable City
- Convenient and connected mobility choices
- Strong and healthy environment

Growing our Economy
- Local, regional, and global innovation
- Strategic, collaborative partnerships

Leading in Public Service
- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE

The purpose of this report is to provide Committee and Council with an update on the progress being made implementing London's Community Energy Action Plan (CEAP) 2014-2018.

CONTEXT

The City of London does not have direct control over how much energy is used in London, but it does have influence. The control over energy use in London rests primarily with our citizens, visitors, employers and employees. Individual and collective action with respect to sustainable energy use, energy management, and energy conservation is critical for our future.

Since the early 1990s, the City of London has been interested in energy use in London primarily for environmental reasons, namely that Londoners' contribution to both smog-forming emissions and greenhouse gas emissions come primarily from fossil fuel energy use.

In the last ten years, with recent increases in electricity and gasoline prices, Londoners have become more aware of the financial cost of using energy. Rising energy prices and the percentage of household income spent on energy is causing many Londoners to pay more attention to their energy use and look for opportunities to conserve energy.

The development, implementation and advancement of municipal/community energy plans is strongly supported by the Association of Municipalities of Ontario (AMO) and the Federation of Canadian Municipalities (FCM). Municipal/community energy plans were also a key component of Ontario's former Climate Change Action Plan. City staff are playing a leadership role within Quality Urban Energy Systems of Tomorrow (QUEST) Canada, a leading organization for community energy planning. QUEST estimates that over 200 communities in Canada have community energy plans, and more than 400 communities - which collectively represent more than 50 percent of Canada's population -are working on community energy initiatives.

The City of London is also a participant in the Community Energy Knowledge Action Partnership (CEKAP), a unique Canada-wide partnership of universities and municipalities studying the challenges of implementing community energy plans. Globally, the City of London is a participant in CDP Cities (formerly the Climate Disclosure Project) and the Global Covenant of Mayors for Climate & Energy.

London's Community Energy Action Plan

London's CEAP was approved by Council in July 2014. The CEAP lays out how we collectively move forward on energy conservation, energy efficiency, renewable energy, and other sustainable energy solutions that reduce greenhouse gas emissions. The CEAP focusses on actions to be taken over the duration of this Council term (2015-2018) to help support medium-term and longer-term greenhouse gas emission reduction goals for 2020 and 2030. In total, 17 City-led strategies for the 2014-2018 period were identified and supported by 40 City-led actions to implement these strategies. This does not include the numerous actions that are taking place (or planned) in the community and by key energy stakeholders in London.

Appendix A contains further Background, the Key Guiding Principles and Goals of London's CEAP. Reporting annually on the status of actions is a key part of the overall program design.

DISCUSSION

Why is the CEAP Important and How Will Londoners & London Businesses Benefit?

The ongoing implementation of the CEAP has many benefits including:

- **Financial benefits** - as noted in the 2017 Community Energy and Greenhouse Gas Inventory, almost $1.5 billion was spent on energy in 2017, and almost 90 percent of this money leaves London. Every one percent reduction in energy use that Londoners and London businesses achieve keeps about $13 million from leaving our local economy. Improvements in energy efficiency compared to 2010 levels of energy efficiency (on a per person basis and applied to activity in 2017) avoided $150 million in energy costs had there been no improvements (i.e., Londoners and businesses would have spent $150 million more in 2017 on energy).

- **Environmental benefits** - reducing energy use in London reduces Londoners' contribution to both smog-forming emissions and greenhouse gas emissions. As noted in the 2017 Community Energy and Greenhouse Gas Inventory, London's greenhouse gas emissions in 2017 were 17 percent below 1990 levels, and greenhouse gas emissions per person were 34 percent lower than 1990 levels.

- **Job creation benefits** - investing in energy saving retrofits, local sustainable energy projects, and local energy production creates local jobs.

- **Local synergies - ‘**connecting the dots’ and capacity building between all of our local initiatives and all of London’s major community stakeholders provides a strong framework for community and business collaboration.

How is CEAP Being Funded?

The CEAP draws upon existing resources across the Corporation performing work that aligns directly or indirectly with energy conservation and energy efficiency. In addition to City staff time, funding allocated to energy-related, community-led actions, awareness, and education in 2018 will be similar to recent years, in the range of $25,000 to $50,000.

What Progress Has Been Made to Date?

Over one-quarter of the CEAP’s strategies have been fully-implemented and an additional 60 percent of strategies are well underway.

Almost two-thirds (26 of 40) of the City-led actions in support of the CEAP’s strategies have also been completed, with an additional one-third (13 actions) nearing completion. The following table provides a snapshot of progress made in the last 12 months.

Overall Progress on CEAP’s 17 Key Strategies – As of July 2018				
Not Started	**25 Percent Completion**	**50 Percent Completion**	**75 Percent Completion**	**Completed**
0 strategies (0%)	1 strategy (6%)	1 strategy (6%)	10 strategies (59%)	5 strategies (29%)

Overall Progress on CEAP’s 40 City-led Actions – As of July 2018				
Not Started	**25 Percent Completion**	**50 Percent Completion**	**75 Percent Completion**	**Completed**
0 actions (0%)	0 actions (0%)	1 action (3%)	13 actions (33%)	26 actions (65%)

Examples of recent City-led actions include:

- Completing the London phase of the Green Municipal Fund to examine barriers to “green development” and how to address the barriers in the context of a multi-use development;

- Hosting two Local Energy Efficiency Partnerships (LEEP) for Renovators workshops for Natural Resources Canada and the London Home Builders’ Association;

- Partnering with the London Environmental Network to support the development of Green Economy London, a target-based sustainability program for business;

- Expanding the annual Go Wild Grow Wild Green Expo (April each year) to include a Green Living Zone focusing on local services needed to live a greener lifestyle at home and at work; and

- Expanding Active & Green Communities through further collaborative projects (e.g., Urban Roots London).

City staff have also been testing out new ideas for promoting the progress Londoners have made. City staff developed the three-minute “CEAP: It’s All Up in the Air” video in Fall 2017, from which a series of mini-videos (10-20 seconds) was developed for use on social media. The shorter-length format has worked well on Facebook, with almost 7,900 views versus 630 on Youtube. City staff have also rebranded the former “Reduce Impact London” story-sharing website as “CityGreen Stories” for greater clarity.

Alignment with London's CEAP was a key factor in securing funding from Ontario's former Municipal GHG Challenge Fund, specifically:

- $822,500 to assist with the development of the business case and the first phase of implementation for a bike share program in London; and

- $691,000 to assist with the installation of compressed natural gas (CNG) fuelling infrastructure for both City vehicles and private-sector vehicles, along with vehicle maintenance infrastructure for future City CNG vehicles.

The Municipal GHG Challenge Fund has been cancelled by the Provincial Government. Further direction for both items is being determined.

Appendix B provides a complete list of the actions and a summary of the progress made to date.

What are the Major Activities over the Next 18 Months?

Completion of CEAP 2014-2018 will be the focus for the remainder of 2018 and into 2019. Work has started on the development of the next iteration of the CEAP for 2019-2022. This will involve community engagement on the goals, actions, requirements, and commitments to be incorporated into the 2019-2022 CEAP. Further direction from the Province of Ontario and the Federal Government is anticipated later in 2018 which will be key foundational information for CEAP 2019-2022. A report outlining the Community Engagement Program will be submitted to CWC later in 2018.

ACKNOWLEDGEMENTS

This report was prepared with assistance from Allison Miller, Transportation Demand Management Coordinator.

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Appendix A Background, Key Guiding Principles and Goals of the Community Energy Action Plan (CEAP)
Appendix B Status of City-led Community Energy Action Plan Actions

Appendix A

Background, Key Guiding Principles and Goals of London's Community Energy Action Plan (CEAP)

Background

One of the most critical roles that City staff play is to 'connect the dots' and develop collaborations between local initiatives and all of London's major community stakeholders, the activities they engage in, and the role that these stakeholders can play in London's Community Energy Action Plan (CEAP).

Connection with Other City of London Programs

London's CEAP is connected to many City of London programs and initiatives, across several Services Areas including Environmental & Engineering Services; Planning; Neighbourhood, Children & Fire Services; and Development & Compliance, such as:

- Corporate Energy Conservation & Demand Management (CDM) Plan
- Active & Green Communities and other CityGreen community engagement activities
- Active Transportation and Transportation Demand Management activities
- The London Plan
- London's Bus Rapid Transit (BRT) System
- London On Bikes Cycling Master Plan
- NeighbourGood London (implementation of London Strengthening Neighbourhoods Strategy)
- WhyWaste - waste reduction and diversion programs including the 60% Waste Diversion Action Plan
- Water conservation and efficiency programs
- Climate change adaptation (e.g., stormwater management)
- Parks and Recreation Master Plan
- Urban Forest Strategy

Key Guiding Principles

London's CEAP sets out an action plan and program with the following key principles:

1. This needs to be the Community's plan for London, not the City of London's plan for the community.
2. We can't control the price of energy, but we can control the cost of energy.
3. Start first with conservation.
4. Get the function and size right.
5. Invest in energy efficiency and good design.
6. Make use of free heat and free light.
7. Reduce waste.
8. Make it local.
9. Build on local strengths.
10. Use renewable energy.
11. Measure your progress.
12. Share your stories.

Goals of CEAP

The CEAP focusses on actions to be taken over the duration of the Council term (2015-2018). The overall goals are to:

1. Increase the local economic benefit of sustainable energy use through:
    a. Cost savings from energy conservation and energy efficiency,
    b. Revenue from local production of clean & green energy products, and
    c. Job creation associated with product and service providers engaged in these activities.

2. Reduce the environmental impact associated with energy use, through the use of greenhouse gas emission (GHG) reduction targets consistent with the Province of Ontario's goals, namely:
    a. 15 percent reduction from 1990 levels by 2020,
    b. 37 percent reduction from 1990 levels by 2030, and
    c. 80 percent reduction from 1990 levels by 2050.

In addition, there are specific goals (either measureable or aspirational) established for each energy-using sector in London:

- Single-Family Homes
- Multi-Unit Residential Buildings
- Commercial and Institutional Buildings
- Industry and Manufacturing
- Stores and Restaurants
- Local Energy Production and Cogeneration of Heat and Power
- Vehicles and the Transportation System

The three most common benchmarks being used for reporting on overall progress are:

- 1990 – the baseline year used for the Province of Ontario's GHG reduction targets
- 2007 – the year energy use and greenhouse gas emissions reached their peak in London
- 2010 – the first year for which total energy cost data has been determined

What Impact will the New Ontario Provincial Government Have?

With the change of government at the provincial level, any activity outlined within Ontario's Climate Change Action Plan for 2016-2020 that relied on revenue from the former Cap & Trade program are either already cancelled or in the process of being cancelled. These include the following:

- Electric Vehicle Charging Incentive Program
- Electric Vehicle Incentive Program
- Green Commercial Vehicles Program
- GreenON Challenge for non-government organizations
- GreenON Commercial programs for small and medium-sized businesses, food manufacturing and greenhouses
- GreenON Industries
- GreenON Residential Rebates for heat pumps, insulation, smart thermostats, solar, and windows
- GreenON Social Housing retrofit incentives
- Municipal GHG Challenge Fund
- Ontario Municipal Commuter Cycling Program

Most of these programs were relatively new, announced in late 2017 and in operation for just over six months. It is important to note that almost all of the progress made since 2014 - by the City, our key energy stakeholder, and Londoners as a whole - has not relied on these programs for their success. However, their cancellation will hinder the ability for Londoners and London businesses to take action on climate change in the near future.

It is not known at this time what the new provincial government plans to do to replace these cancelled climate change action programs. However, new website content for the renamed Ontario Ministry of Environment, Conservation and Parks states that "We also coordinate Ontario's actions on climate change in the name of healthier communities, ecological protection and economic prosperity." This statement is consistent with the goals of London's CEAP.

Implementation of the CEAP is not reliant on provincial programs, but their existence does help accelerate the pace of action taken.

With the cancellation of the Cap & Trade program m, the federal government announced in July 5, 2018 its intention to apply its “backstop” federal carbon tax to Ontario, starting at $20 per tonne in 2019 and climbing to $50 per tonne by 2022. The federal carbon tax will be applied on a “revenue-neutral” basis, which means that carbon taxes collected from Ontario will be used to reduce other forms of taxes (e.g., income taxes) collected from Ontario by the federal government. The details on how this will be applied are not known at this time.

Current Funding Opportunities for Future CEAP Actions

The long-running Federation of Canadian Municipalities (FCM) Green Municipal Fund program remains in place to help fund municipally-led feasibility studies, plan development, pilot projects, and capital projects on a wide range of environmental initiatives.

In June 2017, the FCM announced its Municipalities for Climate Innovation Program - a new, five-year, $75-million program that helps municipalities prepare for, and adapt to, climate change, and to reduce emissions of greenhouse gases (GHGs). The Municipalities for Climate Innovation Program is funded by the Government of Canada, and is available to all municipalities and their partners. The type of initiatives the program supports include funding for:

- Developing plans (including transportation-related plans);
- Feasibility studies and impact studies;
- Municipal staffing to support climate change actions; and
- Climate change mitigation and adaptation capital project and community initiatives.

The first round of the grants program for the Municipalities for Climate Innovation Program was popular, with the first year’s allotment of funding being fully committed. A second round of funding is expected to open later in 2018.

The Municipalities for Climate Innovation Program also includes the Transition 2050 program, which provides grants for larger non-government organizations to provide training, peer-learning, resources and information-sharing activities on a regional basis to municipalities committed to reducing their GHG emissions. Many of the larger non-government organizations that the City of London works with, such as the Clean Air Partnership and Community Energy Knowledge Action Partnership (CEKAP), have submitted applications to this program.

The Federal Low Carbon Economy Challenge is part of their Low Carbon Economy Fund. The Challenge is broken into two streams:

- Champions stream - The $450 million Champions stream provided to all eligible applicants (provinces and territories, municipalities, Indigenous communities and organizations, businesses and not-for-profit organizations). The deadline for submitting the first round of project proposals was May 14, 2018. Examples of the types of project covered by the Challenge stream included:

    - residential and commercial retrofits, including fuel switching
    - social housing retrofits, including fuel switching
    - municipal building retrofits, including fuel switching
    - organics diversion
    - heavy-duty vehicle retrofits, including energy efficiency and/or fuel switching
    - renewable natural gas production for own use
    - combined heat and power for own use
    - renewable energy systems (e.g., solar photovoltaic (PV), solar hot water systems, wind, micro-hydro) for own use

- Partnerships stream - The $50 million Partnerships stream is limited to Indigenous communities and organizations, small and medium-sized businesses, not-for-profit organizations and small municipalities. The Partnerships stream will help ensure a broad range of Canadians are able to participate in the Challenge. The Partnerships stream will be open for applications later in 2018.

Appendix B

Status of City-led Community Energy Action Plan Strategies and Actions

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
POLICY SUPPORT FOR COMMUNITY ENERGY ACTION PLANNING						
1. Develop pilot programs to test these new policy tools and report back on their effectiveness.				➔		City staff have provided support for the Clean Air Partnership's Expression of Interest submission to the Green Ontario (GreenON) Fund for a multi-municipality LIC pilot program. The Clean Air Partnership will prepare a more-detailed GreenON proposal in Summer 2018. Completed the London phase of the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development.
REPORTING AND EDUCATION ABOUT THE ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS OF ENERGY USE						
2. Work with community and neighbourhood associations to make use of neighbourhood energy maps and other energy information.					✓	Energy maps have been updated up to 2015. Energy maps are a key engagement and planning tool for Active & Green Communities.
3. Work with London Economic Development Corporation to encourage major London employers to report their energy performance to the public.				➔		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.
SINGLE-FAMILY HOMES						
4. Work with the London & St. Thomas Real Estate Board and the LHBA to promote NRCan's new EnerGuide Rating System and other relevant building labelling programs on existing and new houses.			➔			Ontario's proposed mandatory Home Energy Rating and Disclosure (or HER&D) was cancelled in March 2018 due to lobbying efforts from the Ontario Real Estate Association. The OREA's position is a preference for voluntary use of energy performance labelling at the seller's discretion.
5. Continue to work with the LHBA to promote wider use of energy-efficiency technologies and techniques in home construction and renovation.				➔		Natural Resources Canada has selected London to be the first community to participate in the "LEEP for Renovators" pilot project. Both the City and LHBA are providing support for this project. Two workshops have been delivered to date - November 2017 and April 2018. The London region is home to two of Canada's certified for the new Net Zero Home Labelling Program – Sifton Properties and Doug Tarry Homes.

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
MULTI-UNIT RESIDENTIAL BUILDINGS						
6. Work with leading property owners/managers and the London Property Management Association (LPMA) to educate local property owners on the use of energy performance benchmarking and other energy management practices for multi-unit residential buildings, for both the whole building and for marketing of leased space.				➔		Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large buildings in 2018. By July 1, 2019, this will apply to multi-unit residential buildings 100,000 square feet and larger. This represents 50% of London's multi-unit residential buildings. By July 1, 2020, this will apply to buildings 50,000 square feet and larger. This represents 65% of London's multi-unit residential buildings.
COMMERCIAL & INSTITUTIONAL BUILDINGS						
7. Encourage the creation of a business-led entity to foster sharing best environmental practices and reporting on progress in London's commercial building sector.				➔		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.
8. Work with stakeholders to pilot the voluntary use of energy performance labelling and benchmarking tools in London, for both the whole building and for the marketing of leased space, to test and demonstrate the potential value of the various energy performance labelling and benchmarking activities available.				➔		Ontario mandatory energy benchmark reporting data for the Broader Public Sector is now available. By July 1, 2018, Ontario's EWRB will apply to commercial buildings 250,000 square feet and larger. By 2019 and 2020, this will apply to buildings 100,000+ square feet and 50,000+ square feet respectively. By 2020, EWRB will apply to about 50% of London's commercial buildings.
INDUSTRY AND MANUFACTURING						
9. Work with stakeholder on the ongoing promotion of energy management best practices, such as those provided by the Canadian Industry Program for Energy Conservation (CIPEC) and Natural Resources Canada's Office of Energy Efficiency.				➔		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.
10. Encourage the creation of a business-led entity to foster sharing best environmental practices and reporting on progress in London's industrial and manufacturing sector.				➔		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
STORES, RESTAURANTS, & OTHER SMALL BUSINESSES						
11. Continue to work with local business associations, leading businesses, the Chamber of Commerce and local utility conservation and demand management staff on energy and environmental initiatives				➔		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.
LOCAL ENERGY PRODUCTION AND CO-GENERATION OF HEAT & POWER						
12. Promote and encourage the expanded use of cogeneration of heat & power for both district energy applications as well as net-metered building/facility applications.					✓	The London Plan and the Downtown Master Plan include references to the existing downtown district energy system. London Hydro is a participant in QUEST Ontario's Combined Heat & Power Consortium and is exploring CHP in net-metered building/facility applications.
13. Investigate the feasibility of utilizing source-separated organics as a feedstock for the production of bioenergy products (biogas, biomass, biofuels) as part of London's waste diversion strategy, as outlined in Road Map 2.0 - The Road to Increased Resource Recovery and Zero Waste.					✓	City staff worked with the Biogas Association and Union Gas on a feasibility study for producing renewable natural gas (RNG) from the organics component of municipal solid waste as part of a larger project dealing with compressed natural gas (CNG) vehicles.
VEHICLES AND THE TRANSPORTATION SYSTEM						
14. Develop and Implement the Comprehensive AT and TDM Action Plan in support of the proposed Complete Streets Mobility Plan.				➔		City has partnered with SustainMobility on the three year CommuteOntario project, funded by the Ontario Trillium Foundation. The project will build on the Business Travel Wise Program by testing new commuter programs and incentives on a broader scale.
15. Provide tools and resources to help Londoners assess the cost/benefit of replacing older vehicles with more-efficient new vehicles, vehicle downsizing, and eco-driving techniques.					✓	MEP Implementation funding was used to cover a portion of the costs for the MyCarma London fuel efficient vehicle engagement pilot program, which ended in May 2017 the results of which are being reviewed.
16. Provide tools and resources to assist local fleet owners/operators in determining the lifecycle cost/benefit of low/no emission vehicles and other fleet greening practices.		➔				City staff are in discussions with Fleet Challenge Ontario to explore collaboration on assessing the state of fleet greening practices in London and continued promotion of these practices for local fleet managers.

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
17. Work with Union Gas to promote the use of compressed natural gas (CNG) and renewable natural gas (purified biogas) as a substitute for diesel fuel for heavy-duty vehicles in London.					✓	Successful application to the Ontario Municipal GHG Challenge Fund financing for expansion and shared use of a new CNG fuelling station at Highbury Avenue and Highway 401. (Note: The current Provincial Government has cancelled the Challenge Fund. The project is still being examined by City and Union Gas staff).

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
POLICY SUPPORT FOR COMMUNITY ENERGY ACTION PLANNING						
1. Incorporate the defining principles of London's Community Energy Action Plan and Program into the new London Plan.					✓	The London Plan includes a reference to develop a Community Energy Action Plan.
2. Incorporate in to the London Plan means to encourage new homes and buildings to be "future-ready" through low-cost design principles (e.g., provide conduits) that can accommodate the future installation of electric vehicle charging systems (i.e., "EV-ready"), solar energy systems (i.e., "solar-ready") and district thermal energy loops (i.e., "DE-ready").					✓	The London Plan includes a number of references to "future ready" principles.
3. Incorporate in to the London Plan means to encourage in-fill development in areas served by existing district energy systems to voluntarily connect to the system.					✓	The London Plan and the Downtown Master Plan include references to the existing downtown district energy system.
4. Incorporate in to the London Plan requirements for greenfield industrial, commercial, and high-density residential land development to reserve "utility right-of-ways" to accommodate the future use of district energy systems.					✓	The London Plan includes a reference to district energy being permitted in Downtown, Transit Node, and Industrial areas.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
5. Study the implementation of Local Improvement Charges for residential and commercial building energy and water retrofits in other jurisdictions, such as the pilot program implementation of the Home Energy Loan Program launched in the City of Toronto in 2014.					✓	City staff provided support for the Clean Air Partnership's (CAC's) Expression of Interest submission to the former Green Ontario (GreenON) Fund for a multi-municipality LIC pilot program to test the delivery of such a program through a third-party organization as well as test measures to minimize potential financial risks to municipalities. The CAC is continuing to explore funding options for this proposal.
6. Work with the development industry on an integrated community energy solutions pilot project, of sufficient size, to evaluate current practices (municipal and developer); to identify potential barriers in new developments, and to begin the process of overcoming these barriers for the future development in London. Alternatively, carry out a detailed analysis of a comparable project(s) in another Ontario or Canadian jurisdiction.				➔		Completed the London phase of the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development. This is a multi-municipality project with the City of Kingston, City of Kitchener, and City of Waterloo to study "green development" policies. Project is being undertaken by s2e Technologies, the technology consultant for the West 5 development, with the final report expected by Fall 2018.
7. Advocate for increased support from federal and provincial governments for undertaking community energy planning at the municipal level of government.					✓	City of London staff will continue to participate in and support the activities undertaken by Quality Urban Energy Systems for Tomorrow (QUEST).
8. Participate as an observer the Ontario Power Authority's (OPA's) regional electricity planning activities for the London area in 2015.					✓	An Integrated Regional Resource Plan (IRRP) was released for the Greater London sub-region in January 2017.
REPORTING AND EDUCATION ABOUT THE ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS OF ENERGY USE						
9. Identify "influencers" in the community, such as individuals in businesses, organizations, neighbourhoods, and schools at all levels of education and develop strategies to enlist and engage them.					✓	City staff participated on a Steering Committee that established the London Environmental Network (LEN) which includes a number of groups that focus on energy. City staff are identifying influencers at the community level through Active & Green Communities (see Action 10 below). City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
10. Where possible, implement strategies that engage Londoners at the community or neighbourhood level, or carry out a detailed analysis of a comparable project(s) in another Ontario or Canadian jurisdiction.					✓	Community-led and city-led activities have been delivered through Active & Green Communities. In 2017, participation was opened to all interested community groups.
11. Test the use of new monetary and non-monetary incentives to encourage Londoners to change established energy-using behaviours or habits.					✓	The Active & Green Home Check-Up pilot project offered free energy saving advice to participating households . The MyCarma London pilot project offered a free ecodriving assessment and new vehicle fuel efficiency comparisons.
12. Work with the Mayor's Sustainable Energy Council (MSEC), London Hydro, Union Gas to develop additional key indicators and performance measures for community energy use, such as the amount of local energy produced, average building energy efficiency (GJ/m^2 floor area), and the economy-related energy and GHG emission indicators.				➔		The annual Community Energy and Greenhouse Gas Emissions Inventory now includes energy productivity ($GDP per GJ of energy) as a key indicator. Five of the CEAP's 13 sector-specific goals now have performance measurements in place. Ontario mandatory energy benchmark reporting for the Broader Public Sector is now available. Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large commercial buildings in 2018.
13. Work with London Hydro and Union Gas to update energy maps and detailed energy model with more current data (e.g., 2012 data), and determine appropriate frequency for future updates.					✓	London Hydro has provided utility data for 2011 – 2017. Union Gas has provided utility data for 2011 – 2016. Working with Fanshawe College GIS program faculty and students on creating additional map tools.
14. Report key community energy use and associated greenhouse gas emissions indicators on an annual basis, including but not limited to the annual Community Energy and Greenhouse Gas Emissions Inventory.					✓	Annual Community Energy and Greenhouse Gas Emissions Inventory reports have been reported for every year since 2013 (2017 is the latest year) City staff have been using of easy-to-understand infographics for use in public education print materials. Data has also been communicated through videos on social media – both long (3 minutes) and short (15 seconds) formats. Short formats are getting broader reach.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
SINGLE-FAMILY HOMES						
15. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities. Peer benchmarking of water consumption is available on the London Hydro website.
16. Work with Union Gas to identify priority neighbourhoods (i.e., “red zones” on energy map) for implementation of their new Home Reno Rebate program and Helping Homes Weatherization program, and assist in the promotion of these programs.					✓	Updated energy maps have been shared with Union Gas staff. Through Active & Green Communities, energy mapping data is being used in participating to identify parts of that neighbourhood to target promotion of Union Gas programs will promote Union Gas programs. (see Action 10).
17. Work with the London Home Builders’ Association (LHBA) to: Explore the potential for a "LEEP 3.0" technology evaluation project Evaluate Toronto's Home Energy Loan Program (LIC pilot) Develop and deliver a draftproofing & insulation demonstration project				➔		LHBA participated in the LIC Stakeholder workshop in April 2016. Natural Resources Canada has selected London to be the first community to participate in the “LEEP for Renovators” pilot project. Both the City and LHBA are providing support for this project. Two workshops have been delivered to date - November 2017 and April 2018.
18. Work with London Hydro and Union Gas to explore options for providing peer comparison (social benchmarking) information on household energy use to encourage conservation.					✓	The Active & Green Calculator provided by Project Neutral allows participants to compare their energy use against their neighbourhood and London as a whole, and has been designed to import data through London Hydro’s Green Button protocol. (see Action 10) The Active & Green Calculator and energy maps were incorporated into the Active & Green Home Check-up pilot. Working with Project Neutral to improve and simplify the Active & Green Calculator based on feedback from trials.
19. Use energy mapping resources to develop methodology for measuring the average energy efficiency (energy used per square meter floor area) of new single–family homes.					✓	Municipal Property Assessment Corporation (MPAC) property data (which includes data on building type, age, and size) has been matched with utility data to produce residential energy efficiency (GJ/m^2 floor area) maps. (see Action 13).

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
20. Continue working with LHBA to promote the voluntary use of the next generation of the ENERGY STAR for New Homes initiative, as well as broader "green home" labels (e.g., GreenHouse™ Certified Construction and LEED® Canada for Homes)				➔		The LHBA's Technical Committee monitors regulations and processes of a technical, green or environmental nature – building codes, products, materials, building science, community development green practices or standards- and attends OHBA EnerQuality Technical Committee meetings. The London region is home to two of Canada's certified for the new Net Zero Home Labelling Program – Sifton Properties and Doug Tarry Homes.
MULTI-UNIT RESIDENTIAL BUILDINGS						
21. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities.
22. Use energy mapping resources to develop methodology for ongoing measurement of the city-wide average energy efficiency (energy used per square meter floor area – all commodities) of multi-unit residential buildings.				➔		Working with Fanshawe College GIS program faculty and students on creating additional map tools, including multi-unit residential buildings. (see Action 13) Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large buildings in 2018, which will provide an alternative method to measure this.
23. Determine the share of London's multi-unit residential properties participating in Natural Resources Canada's ENERGY STAR Portfolio Manager and other energy performance labelling and benchmarking programs.					✓	Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of December 31, 2016. A minimum of 20 multi-unit residential buildings in London need to participate in order to be disclosed. This threshold has not been reached to date.
COMMERCIAL & INSTITUTIONAL BUILDINGS						
24. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
25. Work with the stakeholders (e.g., London Chapter of the International Facility Management Association, BOMA Toronto) to promote and share existing energy management best practices (e.g., employee awareness & training, monitoring & reporting, etc.) within London's industrial, commercial, and institutional sector.				➔		Commercial building energy workshop was held in November 2014. City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. (see Action 29 below). Participants included commercial office & retail property managers as well as institutional sector (Fanshawe, Western). City staff have participated in two Fanshawe-led Low Carbon Learning Communities events, an initiative targetting London's institutional sector (the school boards, LHSC, Western) As of June 2018, there were 24 BOMABESt certified buildings in London, up from four in 2013 and 22 in 2017.
26. Determine the share of London's commercial & institutional property owners voluntarily participating in Natural Resources Canada's ENERGY STAR Portfolio Manager and other energy performance labelling and benchmarking programs.					✓	Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of May 2018.In London, 300 buildings, with a total floor area of 2,750,000 m^2, have been assessed as of that date. This represents 31 percent of total commercial and institutional floor area in London.
27. Use energy mapping resources to develop the method for ongoing measuring the average energy efficiency (energy used per square meter floor area) of existing and new commercial & institutional buildings on an annual basis.			➔			Working with Fanshawe College GIS program faculty and students on creating additional map tools, including multi-unit residential buildings. (see Action 13) Ontario mandatory energy benchmark reporting data for the Broader Public Sector is now available. Ontario is introducing its Energy and Water Reporting and Benchmarking (EWRB) regulatory requirement for large buildings in 2018.
INDUSTRY AND MANUFACTURING						
28. Determine the share of London's industrial and manufacturing employers (by percentage of employment) that have documented energy management plans, programs, or systems in place.					✓	In terms of "publicly-stated" commitments to environmental/energy, action based on LEDC's list of London employers and a review of their websites: • Employers with public commitments to environmental/energy management make up more than 50% of London's entire workforce • Out of LEDC's Top 100, 53 are employers with public commitments

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
29. Work with the stakeholders to promote and share existing energy management best practices within London's industrial, commercial, and institutional sector.				➔		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. LEN will be submitting a format application to join the Green Economy Canada (formerly Sustainability CoLab) in Summer 2018.
30. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	This activity is being led by the Water Demand Management program.
STORES, RESTAURANTS, & OTHER SMALL BUSINESSES						
31. Continue to work with local business associations, leading businesses, the Chamber of Commerce and local utility conservation and demand management staff on energy and environmental initiatives.				➔		City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses. Small businesses will be one of the target markets for this program. (see Action 29).
LOCAL ENERGY PRODUCTION AND CO-GENERATION OF HEAT & POWER						
32. Work with London District Energy to prepare an information package that can be used by the City's Development Approvals staff to encourage new development in areas served by London District Energy to connect to the system.				➔		Initial meetings have been held with the City's Development Approvals area and London District Energy staff, with agreement in principle to make these materials available. London District Energy to develop promotional materials.
33. Work with London District Energy to prepare an information package for use by local architects and developers involved with projects in areas served by London District Energy.				➔		The role of the existing district energy system has been incorporated in to the London Plan and draft Downtown Master Plan (see Action 3). London District Energy to develop promotional materials. (see Action 32).
34. Work with London Hydro and the OPA to determine a realistic estimate of and timeline for reaching the maximum potential for cogeneration and renewable electricity-generating capacity in London					✓	An Integrated Regional Resource Plan (IRRP) was released by the IESO for the Greater London sub-region in January 2017. The IESO notes that anticipated future power needs (small in scale, spread out over many customers, and driven more by intensification than by significant new greenfield developments) are well suited to community driven solutions, including local distributed energy resource projects (such as small scale CHP, solar and/or storage technologies).

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
VEHICLES AND THE TRANSPORTATION SYSTEM						
35. Carry out the 2030 Transportation Master Plan, as approved by London Municipal Council, for improving London's transportation network to increase walking, cycling, carpooling and use of public transit.				➔		Starting to work on developing the business case for a bike share program in London. Secure downtown bike parking will be implemented in 2018-19 using Federal Public Transit Infrastructure Fund and City funding.
36. Carry out the Short-Term Implementation Strategy for active transportation and Transportation Demand Management.				➔		City has partnered with SustainMobility on the three year CommuteOntario project, funded by the Ontario Trillium Foundation. The project will build on the Business Travel Wise Program by testing new commuter programs and incentives on a broader scale.
37. Obtain statistics on the number of high-efficiency vehicles (e.g., hybrids, plug-in hybrids, electric vehicles, diesel, and compressed natural gas) owned in London.					✓	Vehicle ownership statistics have been obtained for 2010-2014, 2016 and 2017 from IHS Markit.
38. Work with Union Gas to encourage major local fleet operators to adopt the use of compressed natural gas (CNG) vehicles.					✓	Working with Union Gas on the shared use of a new CNG fuelling station at Highbury Avenue and Highway 401.
39. Work with Union Gas and the Biogas Association on a preliminary feasibility study for using "green bin" source-separated organics to produce renewable natural gas (RNG) for use in local CNG vehicles.					✓	City staff submitted a proposed to Union Gas for producing renewable natural gas (RNG) from landfill gas, but Union Gas has delayed this procurement due to the cancellation of Cap & Trade. City staff have also submitted an expression of interest to FortisBC (the gas utility in British Columbia) for supplying RNG. Further information on this program is expected in August.
40. Provide tools and resources to help Londoners assess the cost/benefit of replacing older vehicles with more-efficient new vehicles, vehicle downsizing, and eco-driving techniques. Similarly, provide tools and resources to assist local fleet owners/operators in determining the lifecycle cost/benefit of low/no emission vehicles and other fleet greening practices.				➔		MEP Implementation funding was used to cover a portion of the costs for the MyCarma London fuel efficient vehicle engagement pilot program, which ended in May 2017 the results of which are being reviewed. City staff are in discussions with Fleet Challenge Ontario to explore collaboration on assessing the state of fleet greening practices in London and continued promotion of these practices for local fleet managers.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEERING & ANNA LISA BARBON, CPA, CGA MANAGING DIRECTOR, CORPORATE SERVICES & CITY TREASURER, CHIEF FINANCIAL OFFICER**
SUBJECT:	**CORPORATE ENERGY MANAGEMENT PROGRAM UPDATE**

RECOMMENDATION

That on the recommendation of the Managing Director, Environment & Engineering Services & City Engineer and Managing Director, Corporate Services & City Treasurer, Chief Financial Officer, the Corporate Energy Management Program Update report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Relevant reports can be found at www.london.ca under City Hall (Meetings) include:

- Report to the July 31, 2017 Civic Works Committee (CWC) meeting, Corporate Energy Management Program Update (Agenda Item #5)
- Report to the July 21, 2014 CWC meeting, Updates: Corporate Energy Management Program and Conservation and Demand Management (CDM) Plan (Agenda Item #17)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of managing energy costs, energy conservation, and climate change and other related environmental issues in its 2015-2019 – Strategic Plan for the City of London (2015 – 2019 Strategic Plan). Providing corporate energy use and associated greenhouse gas emissions data supports three of the four Areas of Focus as follows:

Building a Sustainable City
- Strong and healthy environment
- Robust infrastructure
- Responsible growth

Growing our Economy
- Strategic, collaborative partnerships
- Local, regional and global innovation

Leading in Public Service
- Collaborative, engaged leadership
- Proactive financial management
- Excellent service delivery

BACKGROUND

PURPOSE

The purpose of this report is to provide the Civic Works Committee (CWC) and Council with an overview of the updated 2017 Corporate Energy Consumption and Activities Report.

The Consumption and Activities report (found on the Corporate Energy Management Program page on the City of London website www.london.ca) is key deliverable of the City of London's Corporate Energy Conservation and Demand Management (CDM) Plan and the Corporate Energy Management Program.

CONTEXT

In August 2011, the Provincial government introduced Ontario Regulation 397/11 under the *Green Energy Act*, which requires municipalities, municipal service boards, schools boards, universities, colleges and hospitals to report on facility energy consumption and associated greenhouse gas (GHG) emissions annually beginning in 2013. The scope of this mandatory report was limited to those facilities that:

- are heated or cooled and in respect of which the public agency is issued the invoices and is responsible for making the payments for the energy consumptions; or

- are related to the treatment or pumping of water or sewage and in respect of which the public agency is issued the invoices and is responsible for making the payments for the energy consumptions.

London's Corporate Energy Conservation and Demand Management (CDM) Plan was approved by Council in July 2014. The scope of the CDM Plan covers all forms of energy used in activities undertaken by the Corporation of the City of London. The CDM Plan established a goal to reduce total corporate energy use by ten percent from 2014 levels by 2020.

The Ontario Regulation 397/11 reporting requirement does not include significant corporate energy users such as streetlighting and corporate fleet fuel use, nor other needs such as sports field lighting. These energy needs and impacts are included within the scope of the annual Corporate Energy Consumption Reports, as it is imperative that all energy uses and impacts within the City's control are continuously examined for reductions, containment and opportunities.

Energy management activities and reporting for City of London's agencies, boards and commissions are handled by the individual organizations. City staff provides assistance when requested.

DISCUSSION

This CWC report contains details in two key sections with further details contained in a separate report found on the City's website:

- 2017 Corporate Energy Consumption – an update on the City's energy consumption and cost with emphasis placed in the period 2007 until 2017. Previous pertinent reports are available on the Corporate Energy Management website.

- 2017 Energy Management Activities – an update on the program with emphasis on energy reduction initiatives undertaken by the City since 2016.

For the 2017 reporting period, information on energy management activities have been merged within the energy consumption data into one report, as most of the activities or projects described in 2016 Corporate Energy Management Activities report are still in progress or due to be completed this year. Any new projects undertaken in 2017 have been included as well.

This report assists in tracking the City of London's performance to the CDM Plan's goal.

Why is this Important and How Will Londoners Benefit?

Providing information on corporate energy use and associated greenhouse gas emissions helps to inform City staff and Londoners on the progress being made to manage rising energy prices and deliver services more efficiently. The Corporation spent about $19 million on energy in 2017, which represents about three percent of the operating budget. On a per-person basis, the Corporation spent $49 on energy to deliver services to Londoners in 2017.

It is also important for the City of London to lead by example in corporate energy management in order to promote sustainable energy practices and reduce greenhouse gas emissions for those activities that we do have direct control over.

What is the Connection with Other City of London Programs?

Corporate energy management activities are connected to many City of London programs and initiatives, such as the London Plan and London's Community Energy Action Plan (CEAP).

How are the Data Acquired and Information Reported?

Corporate utility use data – electricity, natural gas, steam, and chilled water is maintained in-house by Facilities staff using the EnergyCAP utility bill management system software. Corporate fleet fuel data – diesel and gasoline – is maintained in-house by Fleet Services staff using the PetroVend software system. Environmental Programs staff compile the data, prepare the GHG emissions estimates, and prepare the corporate reports on behalf of a number of City services.

2017 Corporate Energy Consumption

The 2017 Corporate Energy Consumption and Activities Report can be found on the City of London website (www.london.ca). Similar to the 2016 report, the total energy consumption in 2017 is compared with two reporting periods, 2007 and 2014. The year 2007 was the first year that the EnergyCAP software was introduced for the tracking and monitoring of utility data for the Corporation. The year 2014 is the baseline year for the CDM Plan. Highlights include:

- **Total energy use in 2017 was almost ten percent lower than it was in 2014 (Figure 1)**. This is two years ahead of the CDM Plan's goal for a ten percent reduction from 2014 levels by 2020. Over the longer term, total energy use is now 14 percent lower than it was in 2007.

- **Energy use per person was 13 percent lower in 2017 compared to 2014 and 21 percent lower than it was in 2007**. Dividing the corporation's total energy use by London's population provides an indication of improvement in energy efficiency for service delivery:

    - Wastewater treatment energy use per person has decreased by 27%
    - Building energy use per person has decreased by 19%
    - Vehicle Fleet energy use per person decreased by 1%
    - Streetlights energy use per person decreased by 21%

- **Total energy cost in 2017 was reduced by $1.6 million compared to 2016. In 2017 the energy expenditures were almost $19 million (Figure 2)**. This decrease is primarily due to lower electricity prices in the province. The electricity cost for the Corporation has decreased for the first time in the last five years. These reductions flow from the former provincial government's *Fair Hydro Plan* and eight percent price reduction from the *Ontario Rebate for Electricity Consumers Act,* effective since July 2017.

    - Total electricity costs for the Corporation decreased by 9% compared to 2016.
    - Energy costs would have been $2.6 million higher in 2017 if the energy efficiency improvements since 2007 noted above were not in place.

- **Energy related greenhouse gas emissions in 2017 were 64 percent lower than 2007 (Figure 3).** The Corporation's improvement in energy efficiency accounts for about 25 percent of this reduction. In particular, the new centrifugal sludge dewatering system at the Greenway Pollution Control Centre's sludge incinerator, installed in 2014-2015, resulted in a significant reduction in the use of natural gas at that facility. The remaining 75 percent of the reduction comes from Ontario's actions to replace coal-fired power plants with cleaner forms of power generation. Over 90 percent of Ontario's electricity is now generated from emissions-free sources, such as nuclear, hydro-electric stations, wind and solar. In 2017, every 1,000 kilowatt-hours of electricity generated in Ontario produced about 20 kilograms of carbon dioxide emissions. This is significantly better than it was in 2007, when 1,000 kilowatt-hours of electricity produced around 240 kilograms of carbon dioxide emissions.

Figure 1 – Total Corporate Energy Use Since 2007 by Commodity

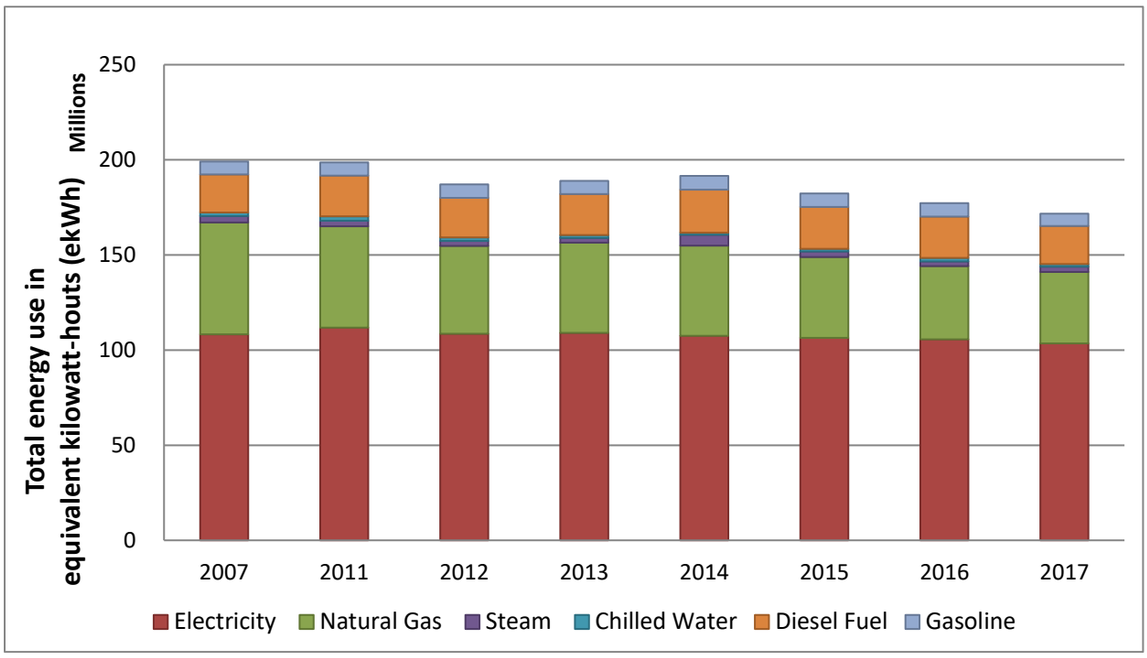


Figure 2 – Trends in Corporate Energy Costs ($ Millions) by Municipal Service Categories

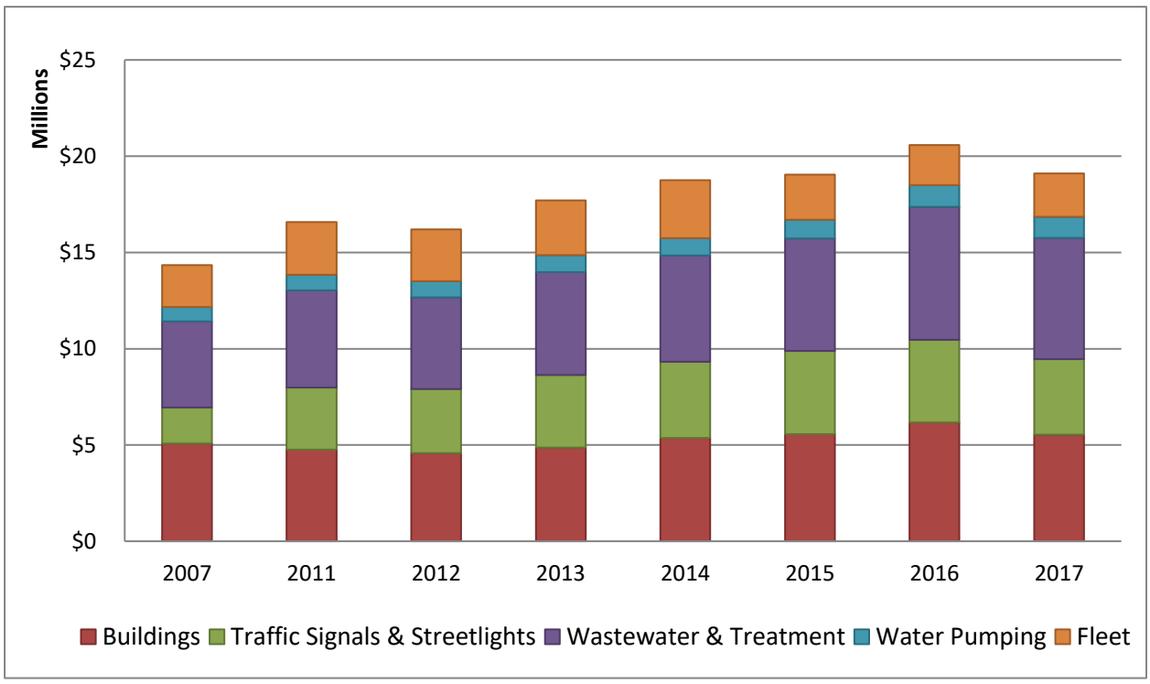
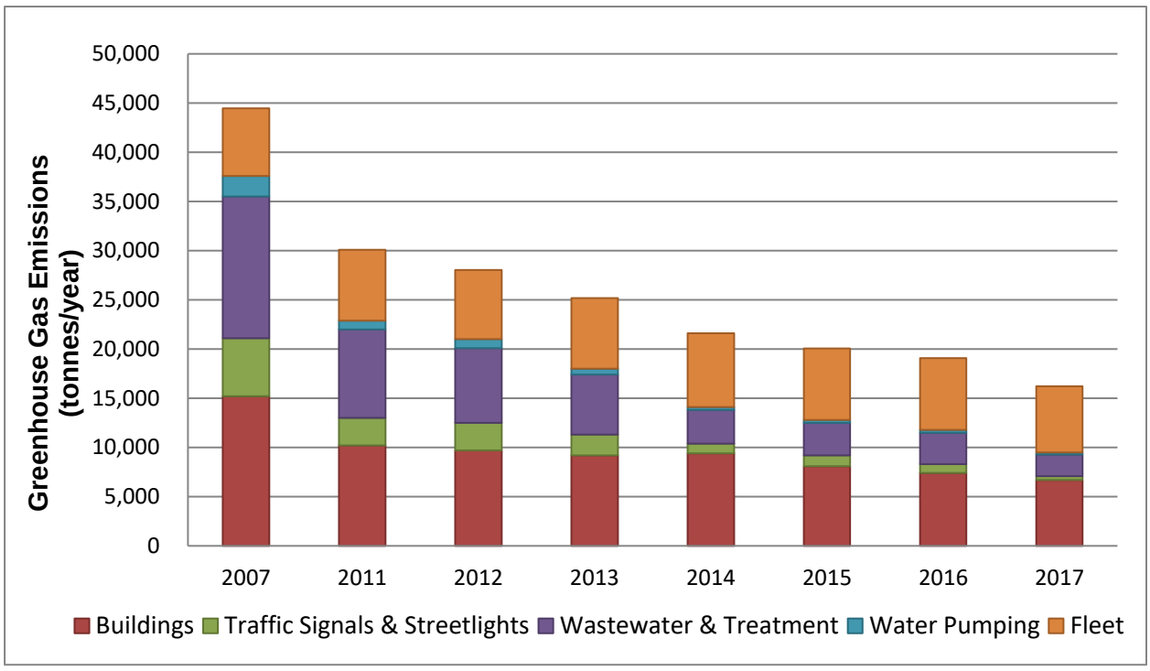


Figure 3 – Trends in Corporate Greenhouse Gas Emissions by Municipal Service Categories



2017 Energy Management Activities

Brief highlights of recent energy management activities include:

- **Wastewater treatment** electricity efficiency and renewable energy measures such as studying the feasibility of using fats, oils, and greases (FOG) collected by the City of London's FOG cup program as a supplementary fuel resource for the planned Organic Rankin Cycle (ORC) engine to generate additional electricity from waste heat at the Greenway Wastewater Treatment facility;

- **Water supply** completion of the new southeast Reservoir Pump Station, built to LEED standards, which uses 25 percent less energy than a similar building constructed to building code;

- **Building retrofits**, including larger projects such as completion of the award-winning renovation of the Canada Games Aquatic Centre, similarly, incorporating new and efficient technologies in smaller projects such as upgrading ice resurfacing machines at arenas with laser technology, heating and ventilation system upgrades as well as lighting upgrades in various City facilities;

- **Fleet,** addition of more Hybrid passenger cars and units using B5 bio-diesel blend increased the Green Fleet rolling stock by two percent in 2017 compared to 2016. Fleet continued examining the potential for compressed natural gas to be used as a fuel source versus diesel.

CONCLUSION

Next Steps

In July 2019, the Corporation is required to provide an update to the CDM Plan, developed back in 2014, as part of the Ontario Regulation 397/11. City staff will be preparing a complete review of the energy management activities undertaken between 2014 and 2018 as well as recommendations for actions to be included within the next iteration of the CDM Plan to cover 2019 to 2022 activities.

Summary

Energy use data suggest that the Corporation has achieved its ten percent energy reduction target by 2020 two years ahead of target and good progress is being made towards achieving the secondary goals associated with CDM Plan. In particular, actions undertaken and planned by Wastewater Treatment Operation, Water Engineering, and Facilities have made significant contributions towards performance to date. Activities in 2018 and 2019 should ensure that these numbers are maintained and likely improved upon.

ACKNOWLEDGEMENTS

This report was prepared with assistance from the following areas:

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Facilities – Steve MacDonald
Parks & Recreation – Lynn Loubert
Purchasing – John Freeman
Roads & Transportation – Shane Maguire
Water & Wastewater – Scott Mathers, Geordie Gauld, Aaron Rozentals

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RECOMMENDED BY:	**RECOMMENDED BY:**
KELLY SCHERR, P.ENG. **MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**	**ANNA LISA BARBON, CGA, CPA** **MANAGING DIRECTOR, CORPORATE SERVICES & CITY TREASURER, CHIEF FINANCIAL OFFICER**

c Scott Stafford, Managing Director, Parks & Recreation

Documents found on the City of London website (www.london.ca) are:

2017 Corporate Energy Consumption and Activities Report

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE**
SUBJECT:	**2017 COMMUNITY ENERGY AND GREENHOUSE GAS INVENTORY**

RECOMMENDATION

That on the recommendation of the Director, Environment, Fleet & Solid Waste the 2017 Community Energy & Greenhouse Gas Inventory report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Report to the August 29, 2017 Civic Works Committee (CWC) Meeting, 2016 Community Energy and Greenhouse Gas Inventory (Agenda Item #12)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of climate change and other related environmental issues in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan). Providing community energy use and greenhouse gas data in a timely fashion supports three of the four Areas of Focus at one level or another as follows:

Building a Sustainable City
- Strong and healthy environment

Leading in Public Service
- Collaborative, engaged leadership

Growing our Economy
- Strategic, collaborative partnerships

BACKGROUND

PURPOSE

The purpose of this report is to provide the Civic Works Committee (CWC) and Council with an overview of the 2017 Community Energy and Greenhouse Gas Inventory, and how this information illustrates the challenges and opportunities associated with reducing community energy use and greenhouse gas emissions.

This CWC report and the *2017 Community Energy and Greenhouse Gas Inventory rep*ort (found on the City of London website www.london.ca) are key deliverables of the Community Energy Action Plan.

CONTEXT

The City of London does not have direct control over how much energy is used in London, but it does have influence. The control over energy use in London rests primarily with our citizens, visitors, employers and employees. Individual and collective action with respect to sustainable energy use, energy management, and energy conservation is critical for our future.

London's Community Energy Action Plan (CEAP) was approved by Council in July 2014. Within the CEAP, listed under the subsection titled Reporting and Education about the Economic and Environmental Considerations of Energy Use, the highest priority actions for the City of London were to:

1. Provide Londoners with annual information on community energy use and greenhouse gas (GHG) emissions.

2. Develop and report new energy-related performance indicators that highlight the total cost of energy and total money saved/generated from community energy actions.

3. Develop new tools to raise awareness on progress being made in London.

The City of London also reports this information on an annual basis to CDP Cities (formerly the Climate Disclosure Project) and the Global Covenant of Mayors for Climate & Energy.

DISCUSSION

Background

The CEAP focusses on actions to be taken over this Council term (2014-2018). The overall goals of the CEAP are to:

1. Increase the local economic benefit of sustainable energy use through:
   a. Cost savings from energy conservation and energy efficiency,
   b. Revenue from local production of clean and green energy products, and
   c. Job creation associated with product and service providers engaged in these activities.

2. Reduce the environmental impact associated with energy use, through the use of greenhouse gas emission (GHG) reduction targets consistent with the Province of Ontario's goals, namely:
   a. 15 percent reduction from 1990 levels by 2020,
   b. 37 percent reduction from 1990 levels by 2030, and
   c. 80 percent reduction from 1990 levels by 2050.

The three most common benchmark dates used by City staff to report on overall progress are:

- 1990 – the baseline year used for the Province of Ontario's GHG reduction targets
- 2007 – the year that energy use and greenhouse gas emissions reached their peak
- 2010 – the first year for which total energy cost data was determined

The *2017 Community Energy and Greenhouse Gas Inventory* provides an overview of the energy used in the London community as a whole. This report covers all significant energy sources used in London: natural gas, gasoline, electricity, diesel, fuel oil, and propane. Energy-using sectors covered by the inventory include transportation, residential, industrial, commercial, and institutional. It also includes an estimate of the total cost associated with these energy needs and the greenhouse gas emissions associated with these energy sources. In addition, this report also includes the greenhouse gas emissions associated with the City of London's W12A Landfill and closed landfill sites as well as sewage sludge incineration at the Greenway Wastewater Treatment Plant.

Why is this Important and How Will Londoners and London Businesses Benefit?

Providing community energy use and greenhouse gas inventory data in a timely fashion helps to inform City staff on what progress is being made to reduce energy use and greenhouse gas emissions for the major energy-using sectors in London. This helps City staff to reassess priority projects, determine which energy-using sectors to work with and which energy commodities to focus on.

Providing these inventory data in a timely fashion also provides Londoners and London businesses and institutions with both information and feedback on the impact that their collective actions have made to date. These inventory data are also the foundation for many of the community engagement tools developed to date, such as the Trouble with Bubbles greenhouse gas visualization video as well as energy infographics.

What is the Connection with Other City of London Programs?

The community energy use and greenhouse gas inventory data is connected to many City of London programs and initiatives, such as:

- London's Community Energy Action Plan (CEAP)
- Corporate Energy Conservation & Demand Management (CDM) Plan
- Active & Green Communities and other CityGreen community engagement activities
- Active Transportation and Transportation Demand Management activities
- The London Plan
- London's Bus Rapid Transit (BRT) System
- London On Bikes Cycling Master Plan
- NeighbourGood London (implementation of London Strengthening Neighbourhoods Strategy)
- WhyWaste - waste reduction and diversion programs
- Water conservation and efficiency programs
- Climate change adaptation (e.g., stormwater management)
- Parks and Recreation Master Plan
- Urban Forest Strategy

How is the Data Acquired and Funded?

The community energy use and greenhouse gas inventory data is maintained in-house by City staff, with utility data being provided by London Hydro and Union Gas (without charge), retail sales of fuel data provided by Kent Marketing (purchased), and other data provided by Statistics Canada. Data analyses and interpretation is completed in-house by City staff. The methodology used to develop the community energy use and greenhouse gas inventory has been reviewed by ICLEI Canada as part of the Partners for Climate Protection Program, as well as HDR Incorporated as part of the CDP Cities program.

Overview of the 2017 Community Energy and Greenhouse Gas Inventory

The *2017 Community Energy and Greenhouse Gas Inventory* report can be found on the City of London website (www.london.ca).

Overall, the results in the report continue to tell a positive story for the community. In 2017, Londoners managed to reduce total greenhouse gas emissions to levels that are 17 percent below 1990 levels (versus the target of 15 percent). Ontario's actions to replace coal-fired power plants with cleaner forms of power generation have played a significant role in this reduction. Greenhouse gas emissions from Ontario's electricity grid were 90 percent lower than they were ten years ago. However, Londoners have also taken action by reducing the amount of energy they use at home and at work.

The current data, achieved through provincial and local actions, increases the confidence that Londoners, businesses and institutions will be able to meet our 2020 community greenhouse gas reduction goal to be 15 percent below 1990 levels by 2020. Whether emissions continue to decrease depends upon the impact of energy and fuel conservation efforts, provincial and federal climate change policies, climate trends, economic growth, and consumer choices.

Energy use by sector in London is as follows:

- 40 percent from industrial, commercial, and institutional buildings and facilities;
- 37 percent from transportation, primarily cars and trucks on London's roads; and
- 23 percent from single-family residential homes.

Energy use accounted for 95 percent of community greenhouse gas emissions. The remaining five percent of greenhouse gas emissions are methane emissions from landfills and nitrous oxide emissions from sewage sludge incineration.

Specific highlights of recent progress, as observed by longer-term trends, include:

- **Londoners are using energy more efficiently** – on a per person basis, Londoners and London businesses used 11 percent less energy overall in 2017 than used in 2007.

- **London is producing more good and services for every unit of energy used** – on a dollar gross domestic product (GDP adjusted for inflation) per unit energy basis, London's industrial, commercial, and institutional sector improved the value of goods and services produced per unit of energy used by 55 percent between 1990 and 2017.

- **London is spending less money on energy** – improvements in energy efficiency compared to 2010 levels of energy efficiency (on a per person basis and applied to activity in 2017) avoided $150 million in energy costs had there been no improvements (i.e., Londoners and businesses would have spent $150 million more in 2017 on energy).

- **Londoners' share of greenhouse emissions are significantly lower** – on a per person basis, Londoners and London businesses released 34 percent fewer greenhouse gas emissions in 2017 than they did in 1990, along with reductions in air pollution emissions (e.g., nitrogen oxides, volatile organic compounds) from fossil fuel use.

In addition, since 1990:

- The total amount of energy used in London in 2016 was 57,500 terajoules, 12 percent above 1990 levels. This increase is due to London's growing population along with our growing economy, partially offset by the improved energy efficiencies noted below;
- Energy use per person for transportation decreased by 7 percent;
- Energy use per person for single-family residential homes decreased by 20 percent;
- Energy use per person for industrial, commercial, and institutional buildings decreased by 11 percent; and
- London's total annual greenhouse gas emissions, estimated to be over 2.7 million tonnes, have decreased by 17 percent.

Since 2007, London's "peak year" for energy use:

- The total amount of energy used in London decreased by 3 percent; and
- London's total annual greenhouse gas emissions have decreased by 26 percent.

There are four major energy commodities used in London – natural gas, gasoline, electricity, and diesel. The following table summarizes the impact of these energy commodities in terms of total energy use, total cost, and GHG emissions.

Energy Commodity	**Share of Total Energy Used (in gigajoules)**	**Share of Total Energy Costs**	**Share of Energy-related GHG Emissions**
natural gas	41%	19%	44%
gasoline	27%	36%	37%
electricity	20%	35%	2%
diesel	7%	7%	11%
other	5%	3%	6%

London as a whole spent almost $1.5 billion on energy in 2017, an increase of five percent from 2016. Gasoline costs increased by 13 percent, due primarily to a 67 percent increase in crude oil prices in 2017. Electricity costs decreased by nine percent, due to the combination of lower electricity consumption as well as lower prices resulting from Ontario's Fair Hydro Plan. Natural gas costs increased by 32 percent overall due primarily to a combination of an 80 percent increase in natural gas commodity prices and a six percent increase in natural gas use.

Carbon pricing through Ontario's Cap and Trade program had a relatively modest impact on energy prices, adding about seven percent to the total natural gas price and about 3 cents per litre to the marketing operating margin component of gasoline.

Transportation fuel use remains the one area where overall recent trends have not been positive. The volume of fuel sold in London had been increasing year-over-year between 2011 and 2016, although this trend stopped in 2017 with a reduction of almost three percent between 2016 and 2017.

Vehicle ownership in London has grown by 32 percent since 2011, or almost five percent per year on average. As of December 2017, there were almost 278,000 light-duty vehicles registered in London – an increase of almost 68,000 vehicles since 2011. However, on a positive note, the average annual fuel use per registered vehicle in London was 15 percent lower in 2017 compared to 2011.

Figure 1 illustrates the trend on energy use for major energy-using sectors on a per person basis since 1990. Figure 2 illustrates the trend for energy costs by commodity since 2010. Figure 3 illustrates the trend in total annual greenhouse gas emissions since 1990 and compares these emissions to the greenhouse gas emission reduction targets established by the federal and provincial government.

Figure 1 – Change in Energy Use in London, Per Person by Sector Since 1990

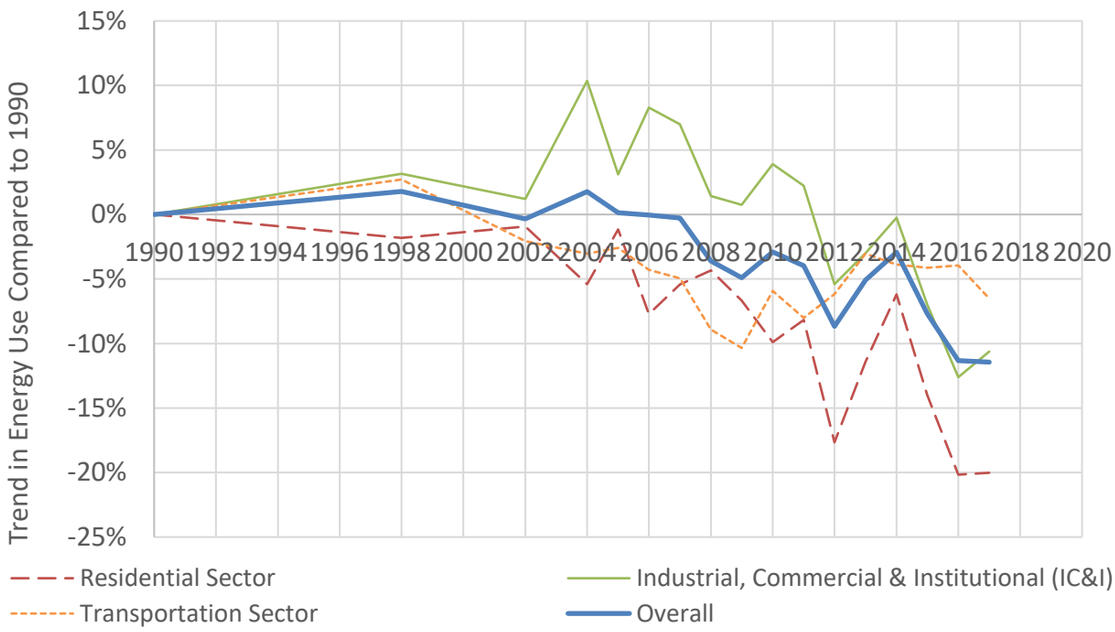


Figure 2 – Trends in Energy Costs ($ Millions) by Energy Commodity

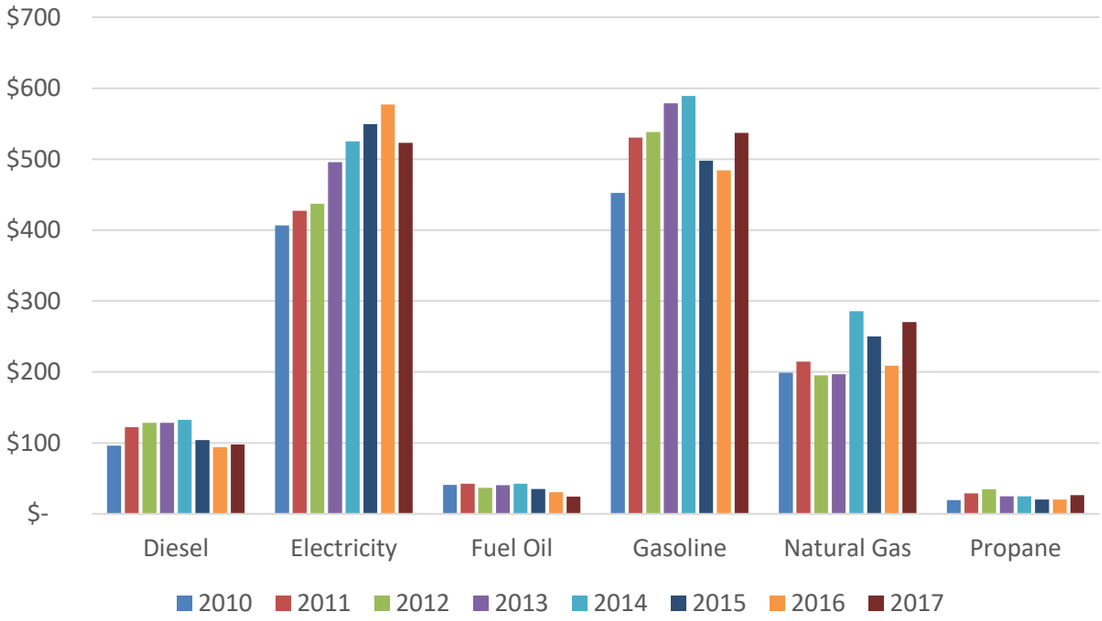
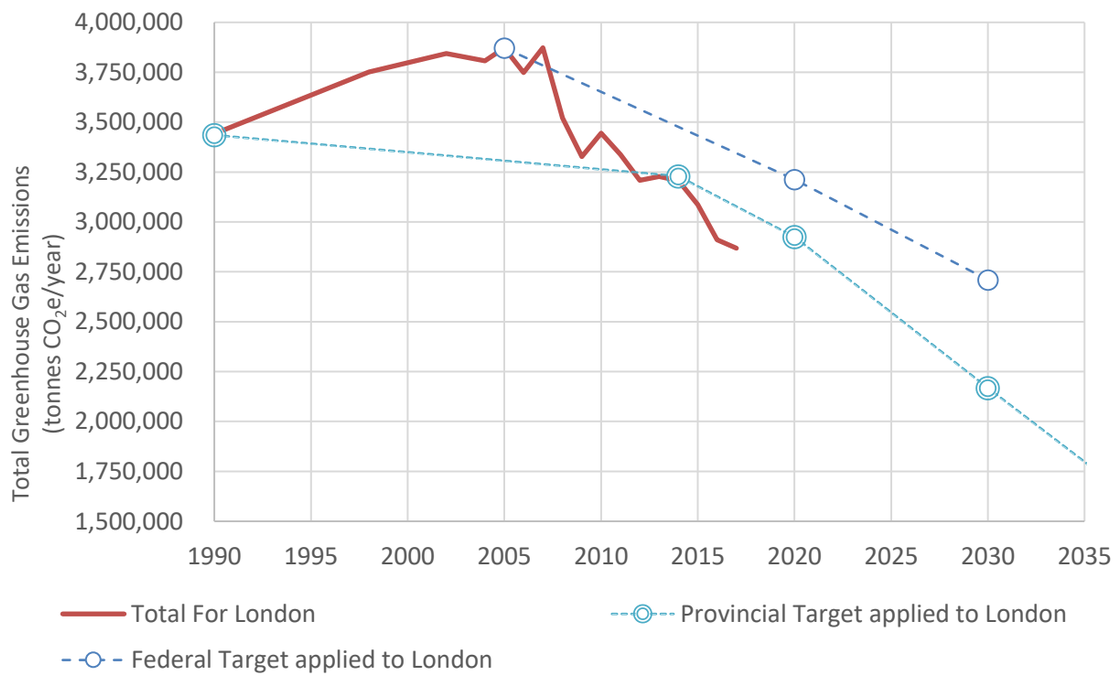


Figure 3 – London's Greenhouse Gas Emission Trend versus Federal and Provincial Reduction Targets



Household-Level Energy Use and Greenhouse Gas Emissions

The average household in London, living in a single-family home, spends about $430 every month on energy. Over half of this, about $240, is spent on gasoline. Electricity accounts for just over $100 per month, while natural gas is under $80 per month.

In terms of household greenhouse gas emissions, the average household emits 10 tonnes per year. As with cost, over half (55%) of this comes from burning gasoline. Natural gas used for space heating and water heating accounts for 38 percent of emissions. Organic waste in the landfill accounts for about six percent. Given Ontario's clean electricity grid, electricity use in the home only accounts for two percent of household GHG emissions.

Challenges and Opportunities

As previously noted, Londoners, London businesses, and institutions spent almost $1.5 billion on energy in 2017, and almost 90 percent of this money leaves London (i.e., leaves the local economy). Every percentage that Londoners and London businesses reduce energy use keeps about $13 million from leaving the local economy. Money saved through energy efficiency and conservation can be used for other purposes, whether that's paying down debts faster or purchasing other local goods and services.

Investing in energy-saving retrofits, sustainable energy projects, and local energy production creates local jobs. Examples of the above include:

- Energy retrofits of existing buildings, as well as the design and construction of high-performance new buildings, are primarily carried out by London area builders, contractors, and service providers and can also generate demand for London area suppliers of energy-saving products.

- Replacing older appliances with new, energy efficient (Energy Star) appliances also helps to reduce energy use and supports the local and regional economy.

- Increasing local electricity generation and bioenergy production keeps energy-related expenditures in London, as well as builds local capacity to develop these projects.

Given the recent trend towards increasing gasoline sales in London, the investments that the City of London is planning to make on its transportation system, particularly through bus rapid transit, London's Cycling Master Plan and other transportation demand management (TDM) solutions, will play a key role in reducing London's use of transportation fuels. Developing the means to measure the contribution that these investments make towards reducing fuel use will be challenging, yet important.

With over 90 percent of Ontario's electricity now coming from emissions-free sources (e.g., nuclear, hydro, wind and other renewable), the role of electricity in London's climate change actions is shifting towards encouraging the use of electricity to replace fossil fuels. Examples could include purchasing electric vehicles to reduce gasoline use, and installing heat pumps to reduce natural gas use for space heating.

Even though the province is looking to switch fossil fuel use towards electricity, conserving electricity will still remain important for reducing energy costs as well as emissions during peak demand periods when natural gas is used to provide peak power.

In Summary

The results as demonstrated in the 2017 Inventory Report continue to tell a positive story for London. Ontario's actions to replace coal-fired power plants with cleaner power generation have played a significant role in this reduction. Londoners have also taken action by reducing the amount of energy they use at home and at work.

Transportation fuel use is the one area where progress is lagging. This highlights the importance of City-led measures outlined in the 2030 Transportation Master Plan and the London Plan to shift Londoners towards sustainable transportation choices.

ACKNOWLEDGEMENTS:

This report was prepared with assistance from Allison Miller, Transportation Demand Management Coordinator and Pat Donnelly, Urban Watershed Program Manager.

PREPARED BY:
JAMIE SKIMMING, P. ENG. MANAGER, AIR QUALITY

PREPARED AND RECOMMENDED BY:	REVIEWED & CONCURRED BY:
JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER

Documents found on the City of London website (www.london.ca) are:

2017 Community Energy and Greenhouse Gas Inventory

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG. MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**EAST LONDON SANITARY SERVICING STUDY MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT: NOTICE OF COMPLETION**

RECOMMENDATION

That, on the recommendation of the Managing Director Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the East London Sanitary Servicing Study:

(a) The preferred treatment and collection servicing alternatives **BE ACCEPTED** in accordance with the Schedule B Municipal Class Environmental Assessment process requirements;

(b) A Notice of Completion **BE FILED** with the Municipal Clerk; and,

(c) The Municipal Class Environmental Assessment Schedule B project file for the East London Sanitary Servicing Study **BE PLACED** on public record for a 30-day review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Civic Works Committee, September 22, 2014 - Optimization of London Wastewater Treatment Plants – A Strategy and Roadmap

Civic Works Committee, June 2, 2015 – Appointment of Consultant – Engineering Services for the Stress-Testing and Re-Rating of Adelaide, Pottersburg & Vauxhall Wastewater Treatment Plants

Civic Works Committee, November 3, 2015 – Appointment of Consultant – Master Plan/Municipal Class EA for the Pottersburg-Vauxhall Interconnect

Civic Works Committee, November 29, 2016 – Appointment of Consultants – Clean Water and Wastewater Fund Projects

Civic Works Committee, July 17, 2017 – Appointment of Consulting Engineer – Design and Construction Administration Services - Pottersburg-Vauxhall Wastewater Treatment Plants Interconnection Project

BACKGROUND

Purpose

The purpose of this report is to identify the preferred servicing alternatives developed in the East London Sanitary Servicing Study Schedule ‘B’ Municipal Class Environmental Assessment (EA), and recommend filing the Notice of Completion for the study to initiate the statutory 30-day public review period. The preferred alternatives identified in

the Class EA provide a strategy for short-term upgrades and long-term strategies for servicing growth in east London.

Context

The Vauxhall Wastewater Treatment Plant (WWTP) and Pottersburg WWTP service a significant portion of east London. The Vauxhall WWTP services an area that is for the most part built-out. The Pottersburg WWTP's service area has the potential for significant amounts of new industrial development; however, the capacity improvements required to upgrade the Pottersburg WWTP are extremely costly. The capacity of the Vauxhall WWTP can be upgraded at a relatively low cost. The purpose of the East London Sanitary Servicing Study is to consider the servicing challenges within Vauxhall and Pottersburg WWTP sewershed areas and provide a preferred approach for providing wastewater collection and treatment to support future development. A copy of the East London Sanitary Servicing Study's Executive Summary has been included as Appendix 'A' of this report.

DISCUSSION

In December 2016, the City of London appointed CH2M Canada Limited (CH2M) to carry out the East London Sanitary Servicing Study. The study evaluated the sanitary servicing alternatives for collection and treatment of flows generated within the Vauxhall WWTP and Pottersburg WWTP sewersheds.

The objectives of the East London Sanitary Servicing Study were to examine and make recommendations with respect to the following:

- Identify current collection and treatment operations within the Vauxhall and Pottersburg WWTP sewersheds;
- Establish potential optimizations at each WWTP, considering the planned Pottersburg-Vauxhall Interconnection;
- Develop recommendations for long-term servicing strategies to accommodate growth in the study area.

The study prepared a long list of servicing alternatives that were evaluated based on technical, environmental, social/cultural/planning and economic criteria.

Public/Stakeholder Consultation

As part of the study, two Public Information Centres were conducted. Notifications for each meeting were published in the two weeks preceding the meeting as well as on the City's webpage. The meetings were held on June 21, 2017 and January 31, 2018 at Tweedsmuir Public School. These meetings were attended by the public and affected property owners. Notifications of the project were also sent to Federal, Provincial, and Municipal stakeholders, and local First Nations communities.

Preferred Treatment System Alternatives

The environmental assessment process identified a short-term and a long-term preferred treatment system alternative.

Short-Term Treatment Solution

The recommended short-term treatment solution includes the following components and is anticipated to provide capacity to the Vauxhall/Pottersburg sewershed areas for the next twenty years:

- Construct the Pottersburg-Vauxhall Interconnection with associated pumping stations;
- Complete a major capacity increase at Vauxhall WWTP from 20.9 million litres per day to 60 million litres per day; and
- Consolidate solids handling operations to Pottersburg WWTP.

The estimated cost of all works in the preferred alternative is $34M to $74.5M depending on technology selected to meet new effluent criteria.

Long-Term Treatment

The long-term treatment solution will be required beyond the current 20 year period. The preferred alternative includes replacing both Pottersburg and Vauxhall WWTPs with a single new treatment plant. The plan also provides the flexibility of servicing additional lands beyond the Vauxhall/Pottersburg sewershed area. The preliminary estimated cost to construct a new treatment plant to service the two sewersheds is $330M-$460M. The timing of construction of this new treatment plant will be dependent on growth in the sewersheds and would ideally be scheduled to coincide with the end of both plants useful lives. Future life cycle improvements at the Vauxhall and Pottersburg WWTP will be planned in consideration that both plants are likely to be decommissioned in a 20 to 30 year timeframe.

Preferred Collection System Alternatives

The preferred alternative for the collection system includes several programs and projects:

- Promote inflow and infiltration reduction by disconnecting weeping tiles from the sanitary sewer system and continuing with sewer inspection programs;
- Continue with the separation of combined sewers in the Vauxhall sewershed;
- Replace and realign the Pottersburg Trunk Sewer upstream of Dundas Street (multiple phases over the next 5 – 10 years); and
- Implement pump capacity upgrades at East Park Pumping Station (design ongoing).

These projects would be scheduled over the next 10-year period and provide the required capacity for development for the next 20-year period.

Budget Implications

The estimated cost of the wastewater treatment projects recommended in the East London Sanitary Servicing Study range from $34M to $74.5M. The cost estimate is highly dependent on the treatment technology required at the Vauxhall WWTP that will be selected as part of the Vauxhall Wastewater Treatment Plant Expansion EA. It is projected that these projects would provide growth servicing for the next 20 years. The funds required for the majority of the wastewater collection projects are included in the current wastewater 20-year plan. The costs related to the expansion of the Vauxhall WWTP or the Pottersburg transfer pumping station are not currently included in the 20-year plan. All the costs related to the short-term collection and treatment projects recommended in the East London Sanitary Servicing Study will be included for Council consideration as part of the 2020-2023 multi-year budget process.

Environmental Assessment Next Steps

Upon acceptance by Council of the recommendations of this report, a “Notice of Completion” will be published identifying that the study report is available for public review for the mandatory 30 calendar days at City Hall – 9th Floor and online at:

http://www.london.ca/residents/Environment/EAs/Pages/East-London-Sanitary-Servicing-Study.aspx

Stakeholders are encouraged to provide input and comments regarding this study during this time period. Should stakeholders feel that issues have not been adequately addressed, they can provide written notification within the 30-day review period to the Minister of the Environment, Conservation and Parks requesting further consideration. This process is termed a “Part II Order”. Subject to no requests for a Part II Order being received, the Project File will be finalized.

CONCLUSIONS

The East London Sanitary Servicing Study was undertaken to develop a wastewater servicing strategy that would accommodate development in the Vauxhall WWTP and Pottersburg WWTP sewersheds. The recommended strategy capitalizes on lower cost capacity at the Vauxhall WWTP, maximizes the useful lives of the Pottersburg and Vauxhall WWTPs, and defers hundreds of millions of dollars of costs related to a new wastewater treatment plant. It is recommended that the preferred servicing alternatives identified in this study be accepted and posted for the 30-day public review period.

Acknowledgements

This document has been prepared with the assistance of Kirby Oudekerk, P.Eng., Environmental Services Engineer in the Wastewater Treatment Operations Division, in consultation with the Wastewater and Drainage Engineering Division.

SUBMITTED BY:	REVIEWED AND CONCURRED BY:
GEORDIE GAULD **DIVISION MANAGER,** **WASTEWATER TREATMENT OPERATIONS**	**SCOTT MATHERS, MPA, P. ENG.** **DIRECTOR, WATER AND WASTEWATER**

RECOMMENDED BY:
KELLY SCHERR, P. ENG., FEC **MANAGING DIRECTOR,** **ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**

August 1, 2018

Attach: Appendix ‘A’ – ELSS Executive Summary

cc. Tom Mahood, CH2M
Tom Copeland, Wastewater and Drainage Engineering
Alan Dunbar, City of London
Jason Davies, City of London

Executive Summary

1.1 Introduction

1.1.1 Study Purpose

The City of London (the City) is planning for future growth and development expected on the east side of the City, within the Vauxhall and Pottersburg sewersheds. To shape this strategy, the City has conducted the East London Servicing Study Environmental Assessment (the study) to identify the preferred approach for managing future wastewater flows collected and treated within these two sewersheds.

The expected population growth in the sewersheds, their current capacity, and the condition of the Vauxhall and Pottersburg wastewater treatment plants (WWTPs) were assessed. This capacity and condition assessment acted as the baseline against which potentially feasible alternatives were evaluated. The study followed the requirements for a Schedule B project under the Municipal Class Environmental Assessment (EA) process outlined in the Municipal Engineers Association's (MEA) Municipal Class EA document (as amended in 2007, 2011 and 2015).

1.1.2 Problem Statements

The Pottersburg Service Area currently experiences the following issues, which the study aimed to address:

- The Pottersburg sewershed is a growth area and the WWTP will require more treatment capacity.
- Substantial wet weather flows in the sewershed cause capacity constraints in the collection system.
- Aging infrastructure at the WWTP will require substantial structural repairs and replacement of existing equipment. Recent stress testing demonstrated that the WWTP may not be able to treat the full amount of peak wastewater flows for which it was designed.
- The construction approach to repair and upgrade the WWTP will be complicated in order to maintain the wastewater treatment capacity.
- Lower phosphorus discharge limits to Lake Erie (via the Thames River) are pending – meaning reduced levels of phosphorus in the WWTP effluent will be required in the future.
- Any additional flow from the Vauxhall WWTP via the planned Pottersburg-Vauxhall Interconnection would need to be treated at the Pottersburg WWTP.
- High flows from storm events cause bypasses of the Pottersburg WWTP to the Thames River or Pottersburg Creek.

The Vauxhall Service Area currently experiences the following issues, which the study aimed to address:

- Aging infrastructure, including equipment and physical structures, will require replacement and upgrades. Lower phosphorus discharge limits to Lake Erie (via the Thames River) are pending – meaning reduced levels of phosphorus in the WWTP effluent will be required in the future.
- Any additional flow from the Pottersburg WWTP via the planned Pottersburg-Vauxhall Interconnection would need to be treated at the Vauxhall WWTP.
- Optimization of the treatment processes is required to reduce the amount of new infrastructure needed to treat potential Pottersburg flows.

- High flows from storm events cause bypasses of the Vauxhall WWTP to the Thames River.
- Substantial wet weather flows in the sewershed cause capacity constraints in the collection system.
- Management of sludge generated at the Vauxhall WWTP needs to be reviewed to determine if transport through the Vauxhall neighbourhood can be reduced.

1.2 Study Area Conditions

1.2.1 20-Year and 50-Year Flow Projections

Potential treatment and collection system alternatives to address the study goals were developed based on 20-year and 50-year growth projections within each sewershed. Table 1-1 summarizes the ultimate (50-year) Pottersburg WWTP design flows. The total estimated ultimate residential population for the Pottersburg sewershed based on this approach is 171,888 people; approximately 50,000 more people than predicted using *The London Plan* and GMIS boundary approach. This value should continue to be refined with Official Plan and GMIS updates to more accurately outline the proportions of residential place types.

Based on the City design criteria, it is estimated that the ultimate average dry weather flow (ADWF) for the Pottersburg WWTP will be approximately 77,000 m^3/d. The ultimate average day flow (ADF), equivalent to ADWF and infiltration, is estimated to be approximately 103,000 m^3/d. Using the 2011 land use from the 2011 calibrated model, the 2011 ADWF and ADF for the Pottersburg WWTP were similarly estimated to be approximately 27,500 m^3/d and 46,700 m^3/d. The 2037 ADWF and ADF were linearly interpolated to be 50,600 m^3/d and 73,000 m^3/d respectively.

The accuracy of the City's design criteria was checked against historical plant flows. The 2011 calculated ADF design flow is approximately 100 percent greater than historical flow to the Pottersburg WWTP. As a result, the ADFs to the Pottersburg WWTP in 2037 and 2067 will more realistically be in the range of 36,500 m^3/d and 51,600 m^3/d, respectively.

Vauxhall WWTP influent flows between 2012 and 2015 were relatively consistent with an average ADF of 14,960 m^3/d. It is assumed that the 2017 ADF is equivalent to this average due to minimal development within the sewershed during this timeframe. The population within the Vauxhall sewershed is anticipated to grow by 1,454 people between 2017 and 2037 due to residential infill of 16.15 ha of greenfield space. Using a similar estimation approach as the Pottersburg sewershed, this growth in population is equivalent to an increase in ADF of approximately 474 m^3/d. No growth beyond 2037 is anticipated. As a result, the Vauxhall sewershed is expected to reach its maximum ADF of 15,434 m^3/d by 2037. Table 1-2 summarizes the estimated 20-year (and subsequently 50-year) increase in Vauxhall WWTP design flows.

Table 1-1. Estimated Increase in Pottersburg WWTP Design Flows

Place Type	Area (ha)	City Design Criteria				Equivalent Population (people)	Harmon	Peaking Factor	ADWF (m^3/d)	ADF (m^3/d)	Peak DWF (m^3/d)	PWF (m^3/d)
		People/ha	Per Capita Flow (Lpcd)	Uncertain Deviation Factor	Infiltration Allowance (L/s/ha)							
Neighbourhood	1,361	126 [2]	230	1.1	0.1	171,690	2.00 [3]	2.00	39,489	51,251	86,875	98,637
Rural Neighbourhood	2	90	230	1.1	0.1	198	4.15	4.15	46	65	208	227
Shopping Area	44	100	230	1.1	0.1	4,353	3.30	3.30	1,001	1,377	3,635	4,011
Institutional	10	100	230	1.1	0.1	1,006	3.80	3.80	231	318	967	1,054
Commercial Industrial	90	100	230	1.1	0.1	8,995	3.00	2.40	2,060	2,833	5,441	6,215
Light Industrial	983	100	230	1.1	0.1	98,258	2.01	1.61	22,599	31,089	39,900	48,389
Heavy Industrial	423 [1]	100	230	1.1	0.1	42,341	2.33	1.87	9,738	13,397	19,989	23,647
Future Industrial Growth	92	100	230	1.1	0.1	9,246	2.99	2.39	2,127	2,925	5,592	6,391
Total	3,005	-	-	-	-	336,048	-	-	77,291	103,255	162,608	188,572

Notes:

1. Airport area (517 ha) not included.
2. Density proportion assumed to be the same as 2011 model proportions (83.2 percent light residential, 9.8 percent medium residential, 7 percent heavy residential). As a result, the neighbourhood density is 126 people/ha.
3. Good practice that the Harmon Peaking Factor should be a minimum of 2. As a result, the calculated factor of 1.8 was increased to 2.

Table 1-2. Estimated Increase in Vauxhall WWTP Design Flows

Place Type	Area (ha)	City Design Criteria				Equivalent Population (people)	Harmon	Peaking Factor	ADWF (m^3/d)	ADF (m^3/d)	Peak DWF (m^3/d)	PWF (m^3/d)
		People/ha	Per Capita Flow (Lpcd)	Uncertain Deviation Factor	Infiltration Allowance (L/s/ha)							
Residential	16.15	90	230	1.1	0.1	1,454	3.69	3.69	334	474	1,357	1,496

1.3 Development and Selection of Alternatives

1.3.1 Treatment System Alternatives

In consideration of the wastewater treatment opportunities and constrains identified in the report, a long list of potential management alternative components was created, and is provided in Table 1-3, below, categorized as either short-term (next 20 years) or long-term (next 50 years) integrated solutions.

Table 1.3. Short- and Long-term Treatment System Alternatives

Alternative Number	Alternative	Description
Short-term		
1	Do-Nothing	Do nothing, leave as is.
2	Minor capacity Increase at Vauxhall WWTP	Capacity increase to handle anticipated growth in the Vauxhall sewershed.
3	Major capacity Increase at Vauxhall WWTP	Capacity increase to handle anticipated growth in both sewersheds.
4	Minor capacity increase at Pottersburg WWTP	Capacity increase to handle anticipated growth in Pottersburg sewershed.
5	Major capacity increase at Pottersburg WWTP	Capacity increase to handle anticipated growth in both sewersheds.
Long-term		
1	Do-Nothing	Do nothing, leave as is.
2	Replace Pottersburg WWTP	Replacement with new facility capable of handling anticipated growth in the Pottersburg sewershed.
3	Replace Vauxhall WWTP	Replacement with new facility capable of handling anticipated growth in the Vauxhall sewershed.
4	Replace Pottersburg and Vauxhall WWTP with two new WWTPs	Replacement with new facilities capable of handling anticipated growth in their respective sewershed.
5	Replace Vauxhall and Pottersburg WWTPs with one new WWTP	Replacement with new facility capable of handling anticipated growth in both sewersheds.
6	Replace Vauxhall and Pottersburg WWTPs with one new WWTP with capacity for additional flow from other sewersheds	Replacement with new facility capable of handling anticipated growth in both sewersheds, plus flow from outside the sewershed.
7	Convert either Pottersburg or Vauxhall WWTPs to an Industrial Pre-treatment Facility	Focus industrial wastewater pre-treatment at one location while other location treats municipal wastewater and pre-treated industrial wastewater.
8	Concentrate liquids treatment at Pottersburg WWTP	Focus liquids treatment from both sewersheds at Pottersburg WWTP and solids treatment at Vauxhall WWTP.
9	Concentrate liquids treatment at Vauxhall WWTP	Focus liquid treatment from both sewersheds at /Vauxhall WWTP and solids treatment at Pottersburg WWTP.

1.3.2 Collection System Alternatives

A long list of collection system alternatives was identified to mitigate the capacity constraints in the collection system and compliment the wastewater treatment preferred alternative. Alternatives were developed under existing, short-term, and long-term categories, and are presented in Table 1-4, below.

Table 1-4. Existing Collection System Alternatives

Alternative Number	Alternative	Description
1	Do-Nothing	Do nothing; leave as-is
2	Disconnect Weeping Tiles	Applies to homes built between 1920 to 1985. Weeping tile connections to sanitary and combined sewers are a source of I&I. The City has a Basement Flooding Grant Program available to residential homeowners, condominium corporations and non-profit housing co-operatives to help pay for the costs of installing a sump pit and pump, and backwater valve, once weeping tiles are disconnected from the sanitary system.
3	Disconnect Downspouts	Downspout disconnection programs to educate and/or provide incentives and/or prohibit through municipal bylaw to home and building owners for disconnecting roof drains from the sanitary or combined sewers. Disconnection can reduce the volume of I&I to the sewer system. Downspout disconnection includes flat roof disconnection. The removal of these connections can be difficult to enforce.
4	Separate Sewers	This applies only to combined areas and involves separating combined sewers into separate storm and sanitary sewers.
5	Replace Pottersburg Trunk upstream of Dundas St.	The existing Pottersburg Trunk upstream of Dundas Street is in poor conditions and through easements. The existing Pottersburg Trunk Realignment Study (CH2M, 2017) was a study complete to evaluate realigning and replacing the Pottersburg Trunk upstream of Dundas Street.
6	Implement Pump Capacity Upgrades for East Park PS	A recent EA recommended increasing the capacity of the East Park PS at its existing site (R.V. Anderson Associates Limited, 2016).
7	Implement Pottersburg-Vauxhall Interconnection	This was a Municipal Class EA Master Plan completed by AECOM that involves being able to transfer flow between the Vauxhall and Pottersburg WWTPs to utilize the available capacity at each.

These existing alternatives align with the goal of improving the capacity of collection system. After these existing initiatives are implemented, it is recommended that the collection system capacity be reassessed. No further evaluation of the existing alternatives was completed in this EA.

Table 1-5 describes the short-term collection system alternatives and identifies the technical, economic, social, and environmental impacts for each alternative.

Table 1-5. Short-Term Collection System Alternatives

Description	Technical Impacts	Economic Impacts	Social Impacts	Environmental Impacts
Alternative 1 – Do-Nothing				
Do nothing; leave as-is				
Alternative 2 – Inspect Sanitary Sewers for Cracks				

Table 1-5. Short-Term Collection System Alternatives

Description	Technical Impacts	Economic Impacts	Social Impacts	Environmental Impacts
This applies to aging sanitary infrastructure in both sewersheds that may have cracks that allows infiltration into the sanitary sewers.	Potential to decrease the I&I entering the sanitary sewers. Could reduce the diameter of the sewer if sewer relining is implemented	Moderate to high capital costs	Sewer relining or new sewers could involve road closure Reducing I&I in the sewer system could reduce downstream bypasses Can reduce basement flooding risks	Reducing I&I in the sewer system could reduce downstream bypasses and sanitary sewer overflows Reducing cracks in the sewer system could improve the surrounding environment Construction should have limited impact on surrounding area
Alternative 3 – Conduct Study to Upsize Eleanor STS				
This involves upsizing the Eleanor STS in the Vauxhall sewershed.	Can be an effective means of reducing basement flooding and SSOs	High capital costs	Major disruptions to public including road closures Can reduce upstream basement flooding risks	Construction should have limited impact on surrounding area
Alternative 4 – Evaluate Available Capacity of Trunks in the Pottersburg Sewershed				
Model simulations in the Pottersburg Sewershed that account for population growth suggest that the Jackson Rd. Trunk, the Pottersburg Trunk (Downstream of Dundas Street), and the Hamilton Rd Trunk have some capacity constraints. This alternative is to verify and evaluate the capacity of these trunks further.	Can be an effective means of reducing basement flooding and SSOs	High capital costs	Major disruptions to public including road closures Can reduce upstream basement flooding risks	Construction should have limited impact on surrounding area

Table 1-5. Short-Term Collection System Alternatives

Description	Technical Impacts	Economic Impacts	Social Impacts	Environmental Impacts
Alternative 5 – Add Offline Storage along Pottersburg Trunk (downstream of Dundas St.)				
This alternative involves adding offline storage along the Pottersburg Trunk downstream of Dundas Street. Offline Storage combines a number of storage alternatives including offline storage (pipes or tanks), sewer replacement or twinning for additional storage capacity or storage tank or tunnel. Specific storage alternative to be used will need to be confirmed using site specific information at a future design stage.	Typically most cost effective means of controlling basement flooding related to wet weather flow Lack of appropriate design standard for sizing Operational challenges to operate and maintain this type of infrastructure Moderate difficulty to implement depending on land availability and site conditions	High capital costs High O&M costs	Construction may significantly disrupt surrounding neighborhood If available open space is used, impact on private property would be minimized	Impact during construction would be confined to surrounding area
Alternative 6 – Implement Pump Capacity Upgrades for Clarke Rd. PS				
Bypassed flow from the Clarke Rd. PS enters the upstream end of the Pottersburg Trunk, and the large majority of the Pottersburg Trunk is simulated to be surcharged during a two-year design storm event. The Clarke Rd. PS currently pumps flows to the Admiral Drive Sub-Trunk, which feeds the Trafalgar Street Sub-Trunk that connects to the southern portion of the Pottersburg Trunk at Trafalgar Street. Increasing the capacity of the Clarke Rd. PS would increase the flows in the southern portion of the Pottersburg Trunk.	Will increase flows to downstream system and treatment facility Flexible pump operation	Moderate capital costs due to cost of mechanical equipment O&M costs similar to normal operation	Implemented using existing infrastructure, impact on residents should be minimal Increased risk of basement flooding downstream of pumping station	Construction should have limited impact on surrounding area

Table 1-5. Short-Term Collection System Alternatives

Description	Technical Impacts	Economic Impacts	Social Impacts	Environmental Impacts
Alternative 7 – Conduct Study to redirect pumped flows from the Clarke Rd. PS				
This alternative is to conduct a study to evaluate redirecting the flows from the Clarke Rd. PS to the Adelaide WWTP. It would involve installing a forcemain that can convey flows north along Clarke road to the sanitary trunk sewer along Cheapside Street leading to the Adelaide WWTP.	Will increase flows to the downstream Adelaide system and treatment facility Will alleviate capacity constraints in the Pottersburg sewershed	High capital costs due to forcemain design and construction O&M costs similar to normal operation	Increased risk of basement flooding downstream of pumping station in the Adelaide sewershed Decreased risk of basement flooding in the Pottersburg sewershed Major disruptions to public including road closures	Construction should have limited impact on surrounding area
Alternative 8 – Conduct study to divert flow from Pottersburg Sewershed				
This alternative is to conduct a study to evaluate diverting flow from the Pottersburg Trunk at Dundas St. under the Pottersburg Creek to the Vauxhall sewershed. This alternative would require replacing approximately 750 m of the sanitary sewer along Dundas St. and Highbury Ave. in the Vauxhall sewershed to allow flow by gravity.	Will increase flows to the downstream Vauxhall system and treatment facility Will alleviate some capacity constraints along the Pottersburg Trunk	High capital costs due to bridge work and downstream sewer replacement Moderate O&M costs for potential required siphon	Increased risk of basement flooding downstream of pumping station in the Adelaide sewershed Decreased risk of basement flooding in the Pottersburg sewershed Would disrupt traffic on arterial road	Implementation could have little to moderate impact on surrounding environment

The long-term alternatives are described below in Table 1-6. Long-term alternatives were screened but were not evaluated in detail in this EA as these alternatives are dependent on the location of the proposed new WWTP.

Table 1-6. Long-Term Collection System Alternatives

Alternative Number	Alternative	Description
1	Do-Nothing	Do nothing; leave as-is
2	Conduct Study to Identify Collection System Efficiencies	This alternative depends on the location of the proposed new WWTP and is to consider efficiencies in conveying the wastewater to the WWTP.

Table 1-6. Long-Term Collection System Alternatives

Alternative Number	Alternative	Description
3	Replace existing Vauxhall and Pottersburg WWTPs with Pump Stations	This alternative depends on the location of the proposed new WWTP and involves adding pump stations to the existing WWTP locations that can pump flow to the proposed new WWTP.
4	Reroute Collection System	This alternative depends on the location of the proposed new WWTP and involves rerouting trunks and pump stations in both sewersheds upstream of the proposed new WWTP.

1.4 Preferred Alternatives & Recommendations

1.4.1 Preferred Treatment System Alternatives & Recommendations

Following screening and evaluation, Alternative 3 was identified as the only feasible short-term alternative and Alternatives 5 and 6 were tied for the preferred long-term alternative. A preliminary cost estimate was developed to the -30% / +50% level and provides an overall estimate range of $34.8 million to $74.5 million to implement the short-term treatment alternative, based on proposals received by the City from Evoqua for the BioMag and CoMag systems.

The cost to implement either long-term treatment alternative was developed at a high level to provide an order-of-magnitude indication of the total project cost by implementing either Alternative 5 or 6. The costs are based on a dollar per litre of treatment value ($3.3/L), as used by the City. Using this factor, the rough costs for implementing one of the two long-term alternatives is:

- Alternative 5: $330 million for 100 MLD of treatment
- Alternative 6: $462 million for 140 MLD of treatment

Additional work is recommended that will impact the overall cost estimates outlined above, including:

- Study and assess the options for conveying flow from outside sewersheds
- Determine possible siting locations for the new facility
- Evaluate costs, benefits, and drawbacks associated with each alternative

Supporting studies and/or investigations recommended in the short-term are listed below:

- Technology review and evaluation to confirm the recommended approach for capacity upgrades at the Vauxhall WWTP
- Hydraulic study and debottlenecking to confirm that the flow paths within the Vauxhall WWTP can accommodate a re-rating
- Review of solids handling capability at the Pottersburg WWTP and identification of recommended upgrades/improvements, as required. Consideration can be given to whether solids are dewatered at Pottersburg WWTP to reduce the number of trucks taking the solids for ultimate disposal at Greenway WWTP
- Assess the condition of the existing equipment at the Vauxhall WWTP to determine if anything requires immediate repair or replacement for continuing service until the long-term preferred alternative is ultimately identified and implemented

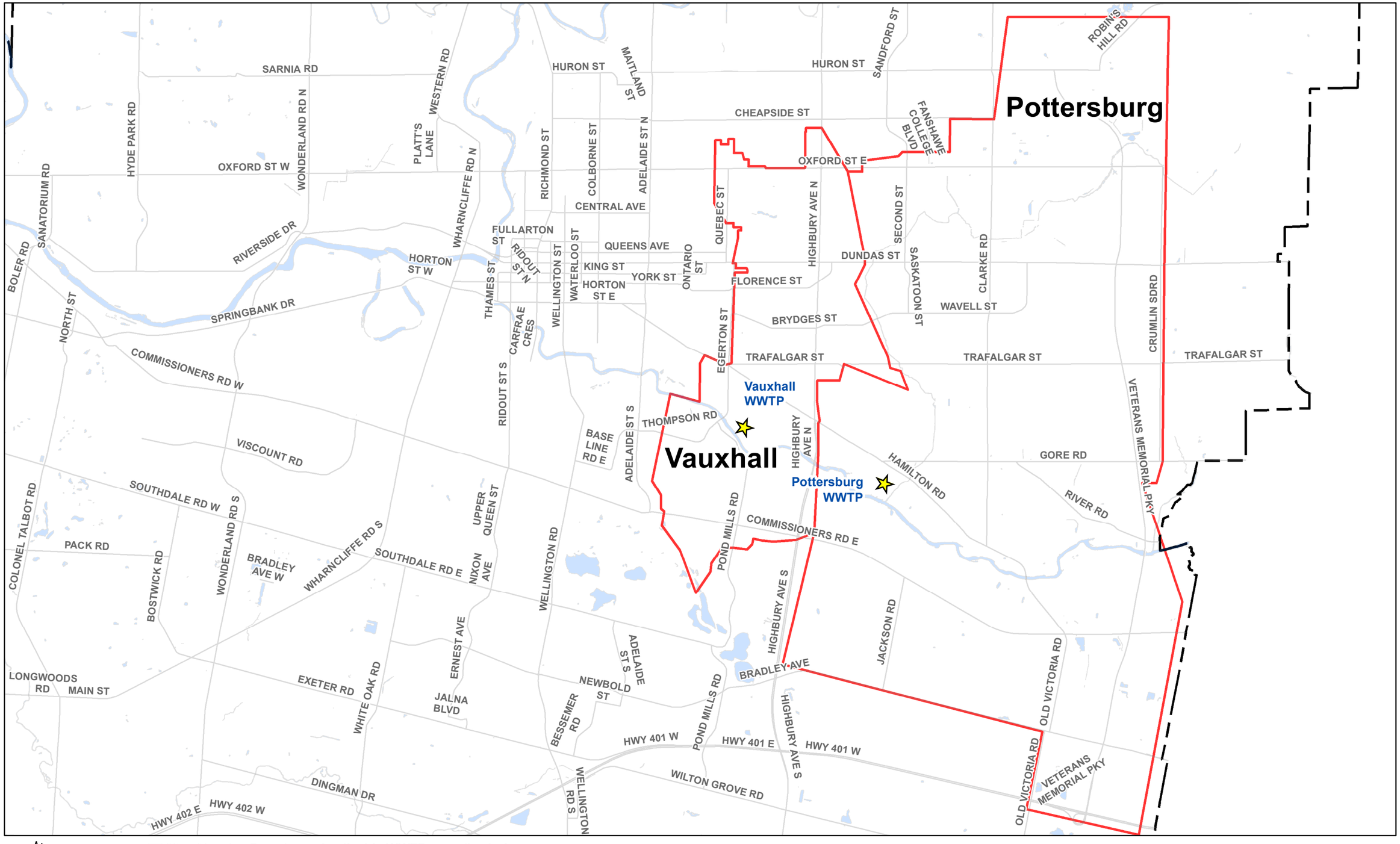
Further work is recommended during a future project phase to identify an ultimate preferred long-term treatment alternative:

- Study and assess the options for conveying flow from outside sewersheds, which will inform the feasibility of constructing Alternative 6 (140 MLD facility) over Alternative 5 (100 MLD facility). Considerations can include development potential of redirecting flow from outside sewershed(s) to a new, large facility (Alternative 6) and the costs associated with doing so
- Determine possible siting locations for the new facility, and whether significant environmental impacts would need to be mitigated as a result
- Complete the design of a pumping station at the Pottersburg WWTP to forward flow to the new facility. Flow from Vauxhall WWTP could be sent to Pottersburg WWTP via the Vauxhall-Pottersburg Interconnection. The design of a pumping station at the Vauxhall WWTP will need to be completed as well
- Evaluate costs, benefits, and drawbacks associated with each alternative, based on the completion of additional work and studies
- Timing to implement the ultimate preferred long-term solution is over 20 years away, and will depend on the remaining life of the infrastructure at Pottersburg WWTP, the actual growth in Pottersburg sewershed, and/or the actual impacts of improvements to the collections systems (for example, a reduction of wet weather peak flows and inflow/infiltration).

1.4.2 Preferred Collection System Alternatives & Recommendations

Collection system Alternatives 2 and 4 were the two short-term alternatives that scored favourably during the evaluation. Alternative 2 will identify cracks in aging sewers and prioritize sewers to be relined. This alternative may help reduce the I&I in the collection system. Alternative 4 will assess the capacity of the Jackson Rd. Trunk, the Pottersburg Trunk (downstream of Dundas St.) and the Hamilton Rd. Sub-Trunk. This study should include flow monitoring, consider population projections, and consider the implementation of the existing alternatives.

The long-term alternatives 2 and 3 were recommended due to their complementary nature with the preferred long-term WWTP alternatives and are dependent on the location of the proposed new WWTP. Therefore, it was recommended that the two screened long-term alternatives be carried forward and revaluated when the location for the new proposed WWTP is selected. Consequentially, this EA did not evaluate these alternatives further.



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Kilometers

City of London Boundary

Major Roads

Applicable WWTP

Pottersburg WWTP

Vauxhall WWTP

Study Area

Pottersburg

Vauxhall

Notes: Source GIS information and aerial imagery property of the City of London

DRAFT

Figure X-X
Study Area
East London Sanitary Servicing Study Master Plan Environmental Assessment
City of London

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TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**APPOINTMENT OF CONSULTING ENGINEER VAUXHALL WASTEWATER TREATMENT PLANT CLASS EA FOR CAPACITY UPGRADES**

RECOMMENDATION

That, on the recommendation of the Managing Director of Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the assignment of consulting services for the completion of the Municipal Class Environmental Assessment to increase of the treatment capacity of the Vauxhall Wastewater Treatment Plant:

a) CH2M Hill Canada Limited **BE APPOINTED** consulting engineers in the amount of $200,694.00, including 20% contingency, excluding HST, and in accordance with Section 15.2 d) of the City of London's Procurement of Goods and Services Policy;

b) the financing for the project **BE APPROVED** in accordance with the "Sources of Financing Report" attached, hereto, as Appendix "A";

c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;

d) the approvals given, herein, **BE CONDITIONAL** upon the Corporation entering into a formal contract; and,

e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

Civic Works Committee, August 13, 2018 – East London Sanitary Servicing Study Municipal Class Environmental Assessment: Notice of Completion.

Civic Works Committee, July 17, 2017 – Appointment of Consulting Engineer – Design and Construction Administration Services - Pottersburg-Vauxhall Wastewater Treatment Plants Interconnection Project

Civic Works Committee, November 3, 2015 – Appointment of Consultant – Master Plan/Municipal Class EA for the Pottersburg-Vauxhall Interconnect

Civic Works Committee, June 2, 2015 – Appointment of Consultant – Engineering Services for the Stress-Testing and Re-Rating of Adelaide, Pottersburg & Vauxhall Wastewater Treatment Plants

2015-19 STRATEGIC PLAN

The 2015-2019 Strategic Plan identifies this objective under: Building a Sustainable City: 1B – Manage and improve our wastewater infrastructure and services; and 5B – Build new wastewater infrastructure as London grows.

BACKGROUND

Purpose

The purpose of this report is to seek approval to award CH2M Hill Canada Limited (CH2M) a contract for consulting services for the completion of a Municipal Class Environmental Assessment (Class EA) for increasing the rated treatment capacity of the Vauxhall Wastewater Treatment Plant, based on the results of a Request for Proposal process (RFP 18-27).

Context

The lands serviced by the Pottersburg Wastewater Treatment Plant are forecast to experience an increase in wastewater flows as a result of expected residential, industrial, and commercial growth in east London. A study of the condition and treatment capacity of the Pottersburg and Vauxhall Wastewater Treatment Plants found that the Vauxhall Plant is in better overall condition and can be more readily upgraded to treat additional flows than the Pottersburg Plant. A project is currently under construction which will permit the transfer of wastewater flows from the Pottersburg sewershed to the Vauxhall Wastewater Treatment Plant. Further capacity at the Vauxhall treatment plant will provide additional wastewater treatment capacity required to allow future development in the Pottersburg sewershed area (Appendix ‘B’: Location Map).

DISCUSSION

Previous studies evaluating the condition and potential treatment capacity of both the Vauxhall and Pottersburg wastewater treatment plants have been completed over the last several years. The Vauxhall plant has been assessed as being in good condition with the potential for a significant capacity increase for a minimal investment. Conversely, the Pottersburg plant is plagued by aging infrastructure and several operational challenges that limit its treatment capacity. Increased wastewater flows related to industrial and residential growth over the next 20 years will exceed the treatment capacity of the Pottersburg plant.

Through the completion of the 2017 Pottersburg and Vauxhall Sewershed Optimization Class EA Master Plan, a pipeline to interconnect these two plants was recommended and will be constructed in 2018. This project will permit flows to be transferred between the two plants, providing operational flexibility and redundancy. The 2018 East London Sanitary Servicing Study Class EA (currently also before Civic Works Committee) recommends that new development within the Pottersburg sewershed be directed to the Vauxhall plant for treatment. In order to facilitate this additional flow, the Vauxhall plant must undergo a significant capacity increase. Any increase to the rated treatment capacity of a wastewater treatment plant requires the completion of a Schedule ‘C’ Municipal Class EA.

Procurement Process

A Request for Proposals (RFP 18-27) was issued for a consulting Engineer to conduct a

Class EA study that will investigate and evaluate cost effective methods of increasing the treatment capacity at the Vauxhall plant to meet the short-term (10 year) and long-term (30+ year) needs of east London.

A Request for Proposal: RFP #18-27 was issued by the City and the following five consulting firms submitted proposals:

- AECOM Canada Limited;
- CH2M Hill Canada Limited;
- Cole Engineering Group Limited;
- Dillon Consulting Limited; and
- Stantec Consulting Limited.

The submissions were reviewed by staff from Wastewater Treatment Operations and Purchasing and Supply to ensure compliance with the City's Procurement of Goods and Services Policy. All five proposals met the City's requirements for submission acceptance and were evaluated via a weighted scoring system by the review team. The proposal from CH2M Hill Canada Limited scored the highest based on this scoring system.

Project Schedule

This Study is expected to require ten (10) months to complete. A detailed design assignment will be considered based on the results of the Study, and could be initiated as early as the second quarter of 2019.

CONCLUSIONS

CH2M Hill Canada Limited received the highest score through the RFP selection process for the completion of a Municipal Class EA to increase the capacity of the Vauxhall wastewater treatment plant. CH2M Hill Canada Limited has shown competence and expertise with public consultation studies of this type and has specific experience at this facility through previous projects.CH2M Hill Canada Limited demonstrated an excellent understanding of the project in their proposal and have provided excellent performance in the past on other similar City projects. It is recommended that CH2M Hill Canada Limited be awarded this assignment.

Acknowledgements

This report was prepared with the assistance of Kyle Murray, P.Eng. in the Wastewater Treatment Operations Division.

PREPARED BY:	REVIEWED BY:
GEORDIE GAULD **DIVISION MANAGER** **WASTEWATER TREATMENT OPERATIONS**	**SCOTT MATHERS, MPA, P.ENG.** **DIRECTOR** **WATER, WASTEWATER AND TREATMENT**
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC **MANAGING DIRECTOR** **ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**	

Attachment: Appendix “A” Sources of Financing

cc: John Freeman, Purchasing and Supply
Alan Dunbar, FP&P
Jason Davies
Chris Ginty, Procurement Officer
Mike Newbigging, P.Eng., CH2M Hill Canada Limited.

APPENDIX 'A'

#18140

Chair and Members
Civic Works Committee

August 13, 2018
(Appoint Consulting Engineer)

RE: Vauxhall Wastewater Treatment Plant Class EA for Capacity Upgrades
(Subledger FS18VX01)
Capital Project ES3099 - Vauxhall Section 1 Aeration Refurbishment
CH2M Hill Canada Limited - $200,694.00 (excluding H.S.T.)

FINANCE & CORPORATE SERVICES REPORT ON THE SOURCES OF FINANCING:

Finance & Corporate Services confirms that the cost of this project can be accommodated within the financing available for it in the Capital Works Budget and that, subject to the adoption of the recommendations of the Managing Director, Environmental & Engineering Services & City Engineer, the detailed source of financing for this project is:

SUMMARY OF ESTIMATED EXPENDITURES	Approved Budget	This Submission		Balance for Future Work
Engineering	$450,000	$204,226		$245,774
NET ESTIMATED EXPENDITURES	**$450,000**	**$204,226**	**1)**	**$245,774**
SUMMARY OF FINANCING:				
Drawdown from Sewage Works Reserve Fund	$450,000	$204,226		$245,774
TOTAL FINANCING	**$450,000**	**$204,226**		**$245,774**

1) **FINANCIAL NOTE:**

Contract Price	$200,694
Add: HST @13%	26,090
Total Contract Price Including Taxes	226,784
Less: HST Rebate	22,558
Net Contract Price	$204,226

JG

Jason Davies
Manager of Financial Planning & Policy

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR – ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**
SUBJECT:	**IRREGULAR RESULT REQUEST FOR TENDER (RFT) 18-82 RIDE ON 72" OUT-FRONT DECK ROTARY MOWERS**

RECOMMENDATION

That, on the recommendation of the Managing Director - Environmental & Engineering Services & City Engineer,

a) RFT 18-82 **BE ACCEPTED** to purchase eight (8) F3990 Out-Front Rotary Mowers with a 72" cutting deck for $198,400 excluding HST from Hyde Park Equipment, 2034 Mallard Rd, London, Ontario, N6H 5L8;

b) Funding for this purchase **BE APPROVED** as set out in the Source of Financing Report attached hereto as Appendix "A";

c) Civic Administration **BE AUTHORIZED** to undertake all administrative acts that are necessary in connection with this purchase; and,

d) Approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract or having a purchase order, or contract record relating to the subject matter of this approval.

STRATEGIC PLAN 2015-2019

This report and recommendation supports several strategic priorities including:

Leading in Public Service
Excellent Service Delivery – At Your Service

BACKGROUND

PURPOSE
To provide necessary background information and seek Committee and Council approval to proceed with an irregular bid award for RFT18-82 – Supply and Delivery of Eight (8) Out-Front Rotary Mowers from Hyde Park Equipment (Figure 1).

Figure 1 – Kubota Out-Front Rotary Mower

CONTEXT
Out-Front Mowers are critical pieces of equipment for the Parks and Recreation service area. These mowers are used by park trim crew teams, golf courses and also roadside maintenance crews for turf maintenance.

DISCUSSION

Seven (7) of the existing 2011 Kubota F3680 Out-Front Rotary Mowers have reached the end of their optimum life and are up for replacement as per our asset management recommended life cycle. After seven cutting seasons these units, with their utilization, typically start to show signs of significant wear and tear which in turn can start to result in costly repairs and reliability issues. Replacement at, or close to, the specified optimum life cycle is also important to maximize the best residual value on trade.

In this RFT, an eighth unit was also requested which was an additional unit approved through assessment growth in the Parks and Recreation budget.

In terms of remarketing the retiring assets, the RFT requested that bidders provide optional trade in allowance for six (6) of the retiring mowers. The seventh retiring mower is being repurposed internally to the W12A Landfill for a low usage assignment of turf maintenance within the landfill property.

Purchasing Process
Fleet Services initiated the replacement project with Purchasing and Supply in June. The RFT was advertised on Bids & Tenders™. Four potential bidders picked up tender packages and two vendors submitted bids.

The tender called for eight (8) mowers with a request for optional trade-in allowances on six (6) retiring units.

Tender Results
Purchasing received two (2) bid submissions on this tender:

Dealer	Model	Price (excluding HST)
Hyde Park Equipment	Kubota F3990	$198,400
Huron Tractor	John Deere JD1570	$270,520

However, it was determined by Purchasing and Supply after opening that the bid from Huron Tractor was non-compliant due to improper bidding procedure with respect to bidding alternatives to the specification without following the amendment/question notification process. As noted above, it is the higher bid of the two submitted.

The disqualification of the second bid created an irregular bid situation. The Procurement of Goods and Services Policy (Section 19.4) specifies that RFT's that have irregular results require approval from Committee and Council.

Financial Impact
The units being recommended are within budget and are the low compliant bidder. Hyde Park Equipment has also offered optional trade-in allowance values on six (6) retiring units at approximately 25% of purchase value, exceeding our salvage target of 15%. Therefore Fleet Services, in consultation with the Manager of Purchasing and Supply, will be exercising the optional trade-in allowance as part of the tender.

The ongoing operating costs and capital replacement funds required during the lifecycle of these assets will be funded through internal rental rates as part of service area operating budgets.

CONCLUSION

Fleet Services in conjunction with Purchasing and Supply recommend that the bid from Hyde Park Equipment be accepted for RFT18-82 for the Supply and Delivery of Eight (8) Out-Front Rotary Mowers with 72" cutting decks for $198,400 excluding HST from Hyde Park Equipment 2034 Mallard Rd, London Ontario N6H 5L8.

Hyde Park Equipment and Kubota out front mowers have been a successful and proven product for the City's application. This choice represents good value for the City of London and is an effective and financially responsible choice.

ACKNOWLEDGEMENTS

This report was prepared in conjunction with Steve Mollon, Manager, Fleet Planning; Dave Fawcett, Co-ordinator, Fleet Planning; and Ian Harris, Procurement Specialist.

SUBMITTED BY:	**REVIEWED & CONCURRED BY:**
MIKE BUSHBY, BA **DIVISION MANAGER,** **FLEET & OPERATIONAL SERVICES**	**JAY STANFORD, MA, MPA** **DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE**
RECOMMENDED BY:	
KELLY SCHERR, P. ENG., MBA, FEC **MANAGING DIRECTOR,** **ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER**	

Appendix "A" - Source of Financing

cc: John Freeman, Manager of Purchasing & Supply
Scott Stafford, Managing Director, Parks & Recreation

APPENDIX 'A'

#18143

Chair and Members
Civic Works Committee

August 13, 2018
(Award Contract)

RE: RFT18-82 Irregular Result - Ride on 72" Out-Front Deck Rotary Mowers
Capital Project ME201801 - Vehicle & Equipment Repl - TCA
Capital Project ME201701 - Vehicle & Equipment Repl - TCA
Capital Project RC2427 - Turf Mtce Equipment
Hyde Park Equipment - $198,400.00 (excluding H.S.T.)

FINANCE & CORPORATE SERVICES REPORT ON THE SOURCES OF FINANCING:

Finance & Corporate Services confirms that the cost of this project can be accommodated within the financing available for it in the Capital Works Budget and that, subject to the adoption of the recommendations of the Managing Director, Environmental & Engineering Services & City Engineer, the detailed source of financing for this project is:

ESTIMATED EXPENDITURES:	**Approved Budget**	**Committed to Date**	**This Submission**	**Balance for Future Work**
ME201801 - Vehicle & Equipment Repl - TCA				
Vehicles & Equipment	$3,975,891	$108,651	$151,419	$3,715,821
ME201701 - Vehicle & Equipment Repl - TCA				
Vehicles & Equipment	$5,082,078	$3,807,952	$25,236	$1,248,890
RC2427 - Turf Mtce Equipment				
Vehicles & Equipment	$279,368	$254,132	$25,236	$0
NET ESTIMATED EXPENDITURES	**$9,337,337**	**4,170,735**	**$201,891** 1)	**$4,964,711**
SOURCES OF FINANCING:				
ME201801 - Vehicle & Equipment Repl - TCA				
Drawdown from Vehicles & Equipment Replacement R.F.	$3,975,891	$108,651	$151,419	$3,715,821
ME201701 - Vehicle & Equipment Repl - TCA				
Capital Levy	$45,558	$45,558		$0
Drawdown from Vehicles & Equipment Replacement R.F.	5,001,090	3,726,964	25,236	1,248,890
Drawdown from Self Insurance R.F.	35,430	35,430		0
	5,082,078	3,807,952	25,236	1,248,890
RC2427 - Turf Mtce Equipment				
Capital Levy	$279,368	$254,132	$25,236	$0
TOTAL FINANCING	**$9,337,337**	**$4,170,735**	**$201,891**	**$4,964,711**

1) **Financial Note:**

Contract Price	**ME201801**	**ME201701**	**RC2427**	**TOTAL**
Add: HST @13%	$148,800	$24,800	$24,800	$198,400
Total Contract Price Including Taxes	19,344	3,224	3,224	25,792
Less: HST Rebate	168,144	28,024	28,024	224,192
Net Contract Price	16,725	2,788	2,788	22,301
	151,419	25,236	25,236	201,891

lp

Jason Davies
Manager of Financial Planning & Policy

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG, MBA, FEC MANAGING DIRECTOR OF ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**PROVINCIAL MAINTENANCE STANDARDS FOR MUNICIPAL HIGHWAYS – AMENDMENTS 2018**

RECOMMENDATION

That, on the recommendation of the Managing Director of Environmental and Engineering Services and City Engineer, the following actions be taken with respect to the Provincial Minimum Maintenance Standards for Municipal Highways:

a) the *Municipal Act, 2001*, O.Reg. 239/02, Minimum Maintenance Standards for Municipal Highways **BE ADOPTED** as the City of London's Minimum Maintenance Standards for Highways;

b) the City of London's Quality Standard for Sidewalk Winter Maintenance and Maintenance Guideline for Sidewalks **BE REPLACED** with the *Municipal Act, 2001*, O.Reg. 239/02, Minimum Maintenance Standards for Municipal Highways Municipal;

c) the Civic Administration **BE DIRECTED** to bring forward a business case for consideration as part for the 2019 budget process with respect to additional costs as a result of a) and

d) the attached proposed by-law (Appendix "A") **BE INTRODUCED** at the Municipal Council meeting to be held on August 28, 2018, to delegate authority to the City Engineer or City Engineer's, Director, Roads and Transportation or Division Manager, Transportation and Roadside Operations, to declare the beginning and end of a significant weather event for the purpose of administering the *Municipal Act, 2001*, O.Reg. 239/02, Minimum Maintenance Standards for Municipal Highways.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Environment and Transportation Committee – April 14, 2003 – Minimum Maintenance Standards for Municipal Highways
- Environment and Transportation Committee – June 7, 2004 – Walkway Winter Policy Review
- Environment and Transportation Committee – January 21, 2005 – Service Level - Winter Sidewalk Maintenance
- Environment and Transportation Committee – November 16, 2009 – Service Level – Winter Sidewalk Maintenance

- Civic Works Committee – October 7, 2014 – Provincial Minimum Maintenance Standards – 2013 Update

- Civic Works Committee – February 3, 2015 - CWC Roadway Winter Maintenance Program

- Civic Works Committee – June 8, 2016 – London ON Bikes Draft Cycling Master Plan

- Civic Works Committee – August 22, 2016 – Provincial Minimum Maintenance Standards – Proposed Amendments 2016

2015 – 19 STRATEGIC PLAN

The initiative supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by managing our infrastructure and *Leading in Public Service* by providing excellent service delivery.

BACKGROUND

The purpose of this report is to provide an update on the approved amendments to the Provincial Minimum Maintenance Standards for Municipal Highways (MMS).

On November 1, 2002, Ontario Regulation 239/02 Minimum Maintenance Standards was enacted. The City of London adopted this regulation in April 2003. The regulation has subsequently been amended by the Province of Ontario on February 18, 2010 and January 25, 2013. The Ontario Regulations 239/02 can be found at the following link: https://www.ontario.ca/laws/regulation/020239.

Municipalities rely on the MMS to manage community demands for road maintenance activities and when defending against claims of damages incurred by residents and other road users. Provided patrolling and inspection records can be produced and subsequent repairs are performed within the time limits set out in the various sections of the regulation, MMS are helpful in ensuring municipalities are providing consistent levels of maintenance throughout the province and in reducing liability.

The Ontario Good Roads Association (OGRA) manages the amendment process and, through the appointed Task Force, released the document to municipalities for comment in 2015. The review process with municipalities is now complete and the revised version of the new MMS is attached to this report.

The 2015 review, unlike previous reviews that focused largely on roadway and sidewalk users, has focused on all users of the road allowance, including cyclists.

The new proposed amendments have been approved by the Province and were enacted on May 3, 2018.

Updates

The Civic Administration has reviewed the amendments from an operational and resourcing perspective. Highlights of the amendments include:

- Winter sidewalk maintenance standards have been added to the MMS. The new MMS standard has a threshold to clear sidewalks once 8 cm of accumulation occurs and allows 48 hours to clear the sidewalk after the snowfall ends. There are also provisions to treat icy sidewalks.

The Civic Administration recommends that the current Quality Standard for Sidewalk Winter Maintenance and Maintenance Guideline for Sidewalks be replaced with the provisions set out in the MMS.

- Encroachment areas near the sidewalk are now to be inspected at the same frequency as the sidewalk itself and, if the encroachment constitutes a significant hazard to pedestrians, the standard is to treat the encroachment within 28 days. Operational and financial impacts are not anticipated with respect to this change.

- The Table Classification of Highways has been revised to better reflect 2016 traffic volumes, especially in large urban centres. Operational or financial impacts are insignificant.

- A standard has been added for cycling networks. Bicycle lanes are defined as a portion of the roadway that has been designated by pavement markings or signage for the preferential or exclusive use of cyclists, or a portion of a roadway that has been designated for the exclusive use of cyclists by signage and a physical or marked buffer. This does not include multi-use pathways within raised boulevards, such as those along Fanshawe Park Road or Wonderland Road.

  This new service will require, removing snow from the bike lane facilities to the depth and time outlined in the table below.

Bicycle Facility Winter Maintenance Table for Snow Removal		
Class of Highway or Adjacent Highway	MMS	
	Depth	Time
1 (i.e. Highbury, Wellington, Exeter, Fanshawe)	2.5 cm	8 hours
2 (i.e. Southdale, Oxford, Dundas, Wharncliffe)	5 cm	12 hours
3 (i.e. Viscount, Dufferin, the Colborne St Cycle	8 cm	24 hours
4 (i.e. Aldersbrook, Doon,Tweedsmuir)	8 cm	24 hours
5 (i.e. local streets and some cul de sacs)	10 cm	24 hours

  The increased winter maintenance cost for this service includes plowing and snow bank removal approximately five (5) times per season in areas where snow storage is limited. Summer maintenance will include asphalt patching, crack-sealing, sweeping, line-marking and signing.

  The estimated cost per kilometer for this increased service level was identified in the Cycling Master Plan and is estimated to be $410,000. These costs are not included in the 2019 budget. A business case will be provided through the 2019 budget amendment process.

- Adding the ability to declare a ‘Significant Event’. When severe weather is approaching or occurring a municipality can suspend its requirement to follow these regulations and other provincial regulation governing hour of service. The declaration allows supervisory staff to effectively plan and maximize

resources in anticipation of and/or during a Significant Event when all resources may be exhausted.

Operational impact that will require a Council approved by-law for such a declaration (Appendix “A”).

- The MMS now applies to all street lights, whereas the current MMS only applied to higher speed and higher volume roads. There are operational impacts from a response time perspective, which will increase the cost to maintain the street lights. The specified timeline to repair street lights (7 days or 14 days depending on the classification of the road) is achievable in most instances; however, these dates will be exceeded if excavation work is required or new equipment needs to be ordered. The time required to obtain locates from all of the utilities may further extend the repair time beyond the specified limits where excavation is required. In these instances, troubleshooting will be done within the specified time, locates will be requested from Ontario One Call, and the repair will be completed within 7 or 14 days after all locates are received.

CONCLUSION

The Civic Administration will implement the required changes and include a business case for the 2019 budget process.

Acknowledgements

This report was prepared with the assistance of John Parsons, Division Manager Transportation and Roadside Operations, Shane Maguire, P.Eng. Division Manager Roadway Lighting and Control, Geoff Belch, Danilo Popadic, Legal and Corporate Services and Jason Wills, Risk Management.

PREPARED BY:	**RECOMMENDED BY:**
JOHN PARSONS, C.E.T DIVISION MANAGER – TRANSPORTATION AND ROADSIDE OPERATIONS	**KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**

July 2018/JP

Appendix “A” – By-law - Delegated Authority

cc: Geoff Belch, Danilo Popadic, Jason Wills

APPENDIX "A"

Bill No.
2018

By-law No.

A by-law to delegate authority to the City Engineer or the City Engineer's designate, Director, Roads and Transportation or Division Manager, Transportation and Roadside Operations, to declare the beginning and end of a significant weather event for the purposes of administering the *Municipal Act, 2001*, O.Reg. 239/02 - Minimum Maintenance Standards for Municipal Highways.

WHEREAS subsection 5(3) of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended, provides that a municipal power shall be exercised by by-law;

AND WHEREAS section 9 of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended, provides that a municipality has the capacity, rights, powers and privileges of a natural person for the purpose of exercising its authority under this or any other Act;

AND WHEREAS section 44(1) of the *Municipal Act, 2001*, S.O. 2001, c. 25, as amended, states that the municipality that has jurisdiction over a highway or bridge shall keep it in a state of repair that is reasonable in the circumstances, including the character and location of the highway or bridge;

AND WHEREAS the *Municipal Act, 2001,* O.Reg. 239/02 - Minimum Maintenance Standards for Municipal Highways establishes minimum standards of repair for highways and bridges or any class of them;

AND WHEREAS section 1(1) of the *Municipal Act 2001,* O.Reg. 239/02 - Minimum Maintenance Standards for Municipal Highways defines a "significant weather event" as an approaching or occurring weather hazard with the potential to pose a significant danger to users of the highways within a municipality;

AND WHEREAS the *Municipal Act, 2001,* O. Reg. 239/02 - Minimum Maintenance Standards for Municipal Highways details the standards for addressing snow accumulation and ice formation arising from a significant weather event;

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

1. The City Engineer or the City Engineer's designate, Director, Roads and Transportation or Division Manager, Transportation and Roadside Operations, to declare the beginning or end of a significant weather event for the purposes of administering the *Municipal Act, 2001*, O.Reg. 239/02 - Minimum Maintenance Standards for Municipal Highways.

2. This by-law shall come into force and effect on the day it is passed.

PASSED in Open Council on [date].

Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading – [Date]
Second Reading – [Date]
Third Reading – [Date]

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**2018-2019 TRANSPORT CANADA RAIL SAFETY IMPROVEMENT PROGRAM AGREEMENT FOR GRADE CROSSING IMROVEMENTS**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions be taken with respect to the 2018-2019 Rail Safety Improvement Program Funding:

a) the proposed by-law (Appendix "A") **BE INTRODUCED** at the Municipal Council meeting to be held August 28, 2018 to:

   i) authorize and approve an Agreement between Her Majesty the Queen in Right of Canada, as represented by the Minister of Transport ("Canada") and The Corporation of the City of London for the Rail Safety Improvement Program for Grade Crossing Improvements; and

   ii) authorize the Mayor and the City Clerk to execute the Agreement for Grade Crossing Improvements authorized and approved in a) i) above. and

b) the Civic Administration **BE DIRECTED** to take all necessary steps to implement the improvements identified in the City of London's application for the Rail Safety Improvement Program funding.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Environment and Transportation Committee – February 14, 2000 – Railway Issues in London
- Environment and Transportation Committee – November 28, 2005 – Priority Setting Factors for Future Rail/Road Grade Separations
- Civic Works Committee – February 25, 2013 – Railway Pedestrian Crossing Safety
- Civic Works Committee – October 7, 2013 – Railway Pedestrian Crossing Safety
- Civic Works Committee – April 28, 2014 – Rail Safety Week
- Civic Works Committee – March 29, 2016 – Transport Canada Grade Crossing Regulations
- Civic Works Committee – April 24, 2017 – Rail Safety Week
- Civic Works Committee – September 26, 2017 – Transport Canada Grade Crossings Regulations and Railway Funding Applications

2015-19 STRATEGIC PLAN

The 2015-2019 Strategic Plan through the strategic focus area of Building a Sustainable City identifies the implementation and enhancement of road safety measures for all users as a means to deliver convenient and connected mobility choices.

BACKGROUND

RSIP Program

The purpose of this report is to approve an Agreement for Grade Crossing Improvements between the City of London and the Minister of Transport for Canada.

Transport Canada's Rail Safety Improvement Program (RSIP) provides federal funding, in the form of grants or contributions to improve rail safety and mitigate the risk of collisions with rail transportation. The program consists of $52 million in funding which is available over a three year time frame: $12 million in 2016-2017, $20 million in 2017-2018 and $20 million in 2018-2019. The deadline for the 2017-2018 funding program was August 1st of 2017.

The program is a comprehensive approach to improving the safety of rail transportation across Canada, consisting of two key components:

- Public Education and Awareness
- Infrastructure, Technology and Research

The RSIP builds on three rail safety programs: the Grade Crossing Improvement Program (GCIP); the Grade Crossing Closure Program (GCCP); and Operation Lifesaver.

City of London Application

Improvements to at-grade rail crossings are required under the recent Grade Crossing Regulations. From the results of the recently completed Grade Crossing Regulations (GCR) safety assessment, the City of London submitted ten applications for safety related improvements that successfully received funding.

Candidates were selected based on Transport Canada's Inventory of high risk at-grade crossings and improvements that were the responsibility of the City. These applications were completed independently of the railway companies allowing the City to be eligible for 80% federal funding with the City contributing 20%.

The safety improvement works include items such as: road approach improvements, sidewalk improvements, pavement markings, signage, and vegetation removal/clearing.

The ten at-grade crossing locations are:

1. CNR - Gore Road (west of Marconi Gate)
2. CNR - Colborne Street (south of York Street)
3. CPR - St. George Street (intersecting Piccadilly Street)
4. CPR - Richmond Street (south of Oxford Street East)
5. CNR - Rectory Street (south of Florence Street)
6. GEXR - Highbury Avenue (South of Florence Avenue North)
7. CNR - William Street (south of York Street)
8. CNR - Maitland Street (south of York Street)
9. CNR - Egerton Street (south of Brydges Street)
10. GEXR - Clarke Road (north of Oxford Street East)

The contribution agreement which includes the project list details is attached in Schedule ‘A’ showing the project cost breakdown and the funding requirements for the City.

The Federal Government is committed to funding $186,800 with the City of London being responsible for $46,700 in order to satisfy the requirements of the RSIP. The City funds are available in the capital budget. The infrastructure works for this program are required to be complete by March 31, 2019.

CONCLUSION

The goal of the Rail Safety Improvement Program is to improve the safety of rail transportation across Canada. This program can assist London in continuing its proactive approach on improving railway safety for pedestrians, cyclists, and vehicular users.

Improvements to at-grade rail crossings are required under the recent Grade Crossing Regulations. The City of London submitted 10 applications for infrastructure improvements of at-grade railway crossing and received a commitment of $186,800 from the Federal Government with the City of London required to commit $46,700.

Municipalities must pass an enabling bylaw that authorizes the signatory to enter into the agreement. The approval requested in this report will enable City of London participation in the 2018-2019 RSIP Funding Program. The infrastructure works for this program are required to be complete by March 31, 2019 in order to receive Federal funding.

Acknowledgements

This report was prepared with assistance from Sam Shannon, C.E.T., Technologist II, and Peter Kavcic, P. Eng., both of the Transportation Planning and Design Division.

SUBMITTED BY:	**RECOMMENDED BY:**
DOUG MACRAE, P.ENG., MPA **DIVISION MANAGER** **TRANSPORTATION PLANNING & DESIGN**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**

Appendix ‘A’: Proposed By-law
Schedule ‘A’: 2018-2019 Rail Safety Improvement Program Agreement for Grade Crossing Improvements

cc: Janice Verhaeghe

APPENDIX ‘A’

Bill No.
2018

By-law No.

A by-law to authorize and approve an Agreement between Her Majesty the Queen in Right of Canada, as represented by the Minister of Transport (“Canada”) and The Corporation of the City of London for the Rail Safety Improvement Program (RSIP) Agreement for Grade Crossing Improvements; and to authorize the Mayor and the City Clerk to execute the Agreement.

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

AND WHEREAS the Government of Canada has introduced a program to promote increased railway safety in Canada;

AND WHEREAS the City has applied to the Government of Canada for funding under the Rail Safety Improvement Program, to assist in carrying out railway crossing safety improvements;

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

1. The Agreement between Her Majesty the Queen In Right of Canada, as represented by the Minister of Transport (“Canada”) and The Corporation of the City of London for the Rail Safety Improvement Program (RSIP) Agreement for Grade Crossing Improvements attached hereto as Schedule A is hereby authorized and approved;

2. The Mayor and the City Clerk are hereby authorized to execute the Agreement authorized and approved in section 1, above.

3. This by-law shall come into force and effect on the day it is passed.

PASSED in Open Council 2018

Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading August 28, 2018
Second Reading August 28, 2018
Third Reading August 28, 2018

Schedule ‘A’

CANADA – CITY OF LONDON

RAIL SAFETY IMPROVEMENT PROGRAM

AGREEMENT FOR GRADE CROSSING IMPROVEMENTS

This Agreement is made as of the date of last signature

BETWEEN: **HER MAJESTY THE QUEEN IN RIGHT OF CANADA**, as represented by the Minister of Transport (“Canada”)

AND

CITY OF LONDON, continued or incorporated pursuant to the Municipality Act (the “Recipient”),

individually referred to as a “Party” and collectively referred to as the “Parties”.

RECITALS

WHEREAS the Minister of Transport is responsible for the Program entitled the Rail Safety Improvement Program (“Program”);

WHEREAS the Recipient has submitted to Canada a proposal for the funding of the Projects which qualify for support under the Program;

AND WHEREAS the Recipient is responsible for carrying out the Projects and Canada wishes to provide financial support for the Projects and its objectives;

NOW THEREFORE, the Parties agree as follows:

1. INTERPRETATION

1.1 DEFINITIONS

In addition to the terms defined in the recitals and elsewhere in this Agreement, a capitalized term has the meaning given to it in this Section.

“**Agreement**” means this contribution agreement and all its schedules, as may be amended from time to time.

“**Agreement End Date**” means March 31, 2020.

“**Asset**” means any real or personal property or immovable or movable asset acquired, purchased, constructed, rehabilitated or improved, in whole or in part, with funds contributed by Canada under the terms and conditions of this Agreement.

“**Asset Disposal Period**” means the period commencing from the Effective Date and ending on the Agreement End Date.

“**Contract**” means an agreement between the Recipient and a Third Party whereby the latter agrees to supply a product or service to any Project in return for financial consideration.

“**Declaration of Completion**” means a declaration in the form substantially prescribed in Schedule E (Declaration of Completion).

“**Effective Date**” means the date of last signature of this Agreement.

“**Eligible Expenditures**” means those costs incurred that are directly related to the Projects and which are considered eligible by Canada and may include cash-equivalent expenditures associated with In-Kind Contributions as set out in Schedule A (Eligible and Ineligible Expenditures).

“**Fair Value**” means the amount that would be agreed upon in an arm’s length transaction between knowledgeable, willing parties who are under no compulsion to act.

“**Final Claim Date**” means the Project Completion Date of a Project no later than March 31, 2019.

“**Fiscal Year**” means the period beginning April 1 of a year and ending March 31 of the

following year.

"**Guide**" means the *Guide to Railway Charges for Crossing Maintenance and Construction* prepared by the Canadian Transportation Agency, applicable to the year that the work was completed.

"**In-Kind Contributions**" means non-monetary contributions of goods, services or other support provided by the Recipient, or to the Recipient by a third party for any Project, for which Fair Value is assigned, but for which no payment occurs. The associated cash-equivalent expenditures may be considered Eligible Expenditures in accordance with Schedule A (Eligible and Ineligible Expenditures).

"**Projects**" means all of the projects described in Schedule B (The Projects).

"**Project Completion Date**" means the date at which all funded activities of a Project under this Agreement have been completed and which must be no later than March 31, 2019.

"**Third Party**" means any person or legal entity, other than a Party, who participates in the implementation of any Project by means of a Contract.

"**Total Financial Assistance**" means funding from all sources towards Eligible Expenditures of the Projects, including funding from the Recipient and federal, provincial, territorial, and municipal governments as well as funding from all other sources, including In-Kind Contributions.

1.2 ENTIRE AGREEMENT

This Agreement comprises the entire agreement between the Parties in relation to the subject of the Agreement. No prior document, negotiation, provision, undertaking or agreement has legal effect, unless incorporated by reference into this Agreement. No representation or warranty express, implied or otherwise, is made by Canada to the Recipient except as expressly set out in this Agreement.

1.3 DURATION OF AGREEMENT

This Agreement will be effective as of the Effective Date and will terminate on the Agreement End Date subject to early termination in accordance with this Agreement.

1.4 SCHEDULES

The following schedules are attached to, and form part of this Agreement:

Schedule A – Eligible and Ineligible Expenditures

Schedule B – The Projects

Schedule C – Certificate(s) of Compliance for Claims

Schedule D – Communications Protocol

Schedule E – Declaration of Completion

2. PURPOSE OF AGREEMENT

The purpose of this Agreement is to establish the terms and conditions whereby Canada will provide funding to the Recipient for the Projects.

3. OBLIGATION OF THE PARTIES

3.1 CONTRIBUTION BY CANADA

a) Canada agrees to pay a contribution to the Recipient of not more than eighty percent (80%) of the total Eligible Expenditures for the Projects but only up to a maximum of one hundred eighty-six thousand eight hundred dollars ($186,800.00).

b) Canada will pay the contribution in accordance with the terms and conditions of this Agreement and the Fiscal Year breakdown in Schedule B.2 (Projects and Cashflow).

c) If Canada's total contribution towards any Project exceeds eighty percent (80%) of the Project's total Eligible Expenditures or if the Total Financial Assistance received or due in respect of the total Project costs exceeds one hundred percent (100%) thereof, Canada may recover the excess from the Recipient or reduce its contribution by an amount equal to the excess.

d) The Parties acknowledge that Canada's role in the Projects is limited to making a financial contribution to the Recipient for the Projects and that Canada will have no involvement in the implementation of any Project or its operation. Canada is neither a decision-maker nor an administrator to the Projects.

3.2 COMMITMENTS BY THE RECIPIENT

a) The Recipient will complete the Projects in a diligent and timely manner, within the costs and deadlines specified in this Agreement and in accordance with the terms and conditions of this Agreement.

b) The Recipient will be responsible for all costs of the Projects including cost overruns, if any.

c) The Recipient will inform Canada promptly of the Total Financial Assistance received or due for all Projects.

d) The Recipient will repay to Canada any payment received for disallowed costs, unexpended contributions, and overpayments made under and according to the terms and conditions of this Agreement.

e) The Recipient will ensure the ongoing operation, maintenance, and repair of any Asset in relation to the Project as per appropriate standards, during the Asset Disposal Period.

f) Canada may request that the Recipient declare to Canada any amounts owing to the federal Crown, under legislation or contribution agreements that constitute an overdue debt. The Recipient recognizes that any such amount owing is a debt due to the federal Crown and may be set-off by Canada in accordance with Section 18.6 (Set-off by Canada).

g) The Recipient will inform Canada immediately of any fact or event that could compromise wholly or in part any Project.

h) Upon Canada's request and throughout the term of the Agreement, the Recipient will promptly provide Canada with updates to the status of the Projects and to the expenditures and forecasts set out in Schedule B (The Projects).

3.3 APPROPRIATIONS AND FUNDING LEVELS

Notwithstanding Canada's obligation to make any payment under this Agreement, this obligation does not arise if, at the time when a payment under this Agreement becomes due, the Parliament of Canada has not passed an appropriation that is sufficient and constitutes lawful authority for making the payment. Canada may reduce or terminate any payment under this Agreement in response to the reduction of appropriations or departmental funding levels in respect of transfer payments, the program under which this Agreement was made or otherwise, as evidenced by any appropriation act or the federal Crown's main or supplementary estimates expenditures. Canada will promptly advise the Recipient of any reduction or termination of funding once it becomes aware of any such situation. Canada will not be liable for any direct, indirect, consequential, exemplary or punitive damages, regardless of the form of action, whether in contract, tort or otherwise, arising from any such reduction or termination of funding.

3.4 FISCAL YEAR BUDGETING

a) The amount of the contribution payable by Canada for each Fiscal Year of a Project is set out in Schedule B.2 (Projects and Cashflow).

b) If the actual amount payable by Canada in respect of any Fiscal Year of a Project is less than the estimated amount in Schedule B.2 (Projects and Cashflow), the Recipient may request that Canada re-allocate the difference between the two amounts to a subsequent Fiscal Year. Subject to Section 3.3 (Appropriations and Funding Levels), Canada agrees to make reasonable efforts to accommodate the Recipient's request. The Recipient acknowledges that requests for re-allocation of Project funding will require appropriation adjustments or federal Crown approvals.

c) In the event that any requested re-allocation of Project funding is not approved, the amount of Canada's contribution payable pursuant to Section 3.1 (Contribution by Canada) may be reduced by the amount of the requested re-allocation. If the contribution payable by Canada pursuant to Section 3.1 (Contribution by Canada) is so reduced, the Parties agree to review the effects of such reduction on the overall implementation of the Project and to adjust the terms and conditions of this Agreement as appropriate.

3.5 CHANGES DURING THE LIFE OF THE PROJECTS

a) Where a change to this Agreement is contemplated, the Recipient will submit to Canada a request for a change.

b) Where the change is approved by Canada, the Parties will execute the corresponding amendment to the Agreement in accordance with Section 18.14 (Amendments).

3.6 INABILITY TO COMPLETE PROJECTS

If, at any time during the term of this Agreement, one or all of the Parties determine that it will not be possible to complete a Project for any reason, the Party will immediately notify the other Party of that determination and Canada may suspend its funding obligation. The Recipient will, within thirty (30) business days of a request from Canada, provide a summary of the measures that it proposes to remedy the situation. If Canada is not satisfied that the measures proposed will be adequate to remedy the situation, then this will constitute an Event of Default under Section 15 (Default) and Canada may declare a default pursuant to Section 15 (Default).

3.7 GUIDELINES

The Recipient will complete the Project, or cause the Project to be completed, in accordance with all applicable laws, regulations and prevailing industry standards for such design and construction and all applicable building and design codes.

4. RECIPIENT REPRESENTATIONS AND WARRANTIES

The Recipient represents and warrants to Canada that:

a) the Recipient has the capacity and authority to enter into and execute this Agreement as duly authorized by City of London Council By-Law No. 2018-___, dated August __, 2018.

b) the Recipient has the capacity and authority to carry out the Projects;

c) the Recipient has the requisite power to own the Assets;

d) this Agreement constitutes a legally binding obligation of the Recipient, enforceable against it in accordance with its terms and conditions;

e) all information submitted to Canada as set out in this Agreement is true, accurate, and was prepared in good faith to the best of its ability, skill, and judgment;

f) any individual, corporation or organization that the Recipient has hired, for payment, who undertakes to speak to or correspond with any employee or other person representing Canada on the Recipient's behalf, concerning any matter relating to the contribution under this Agreement or any benefit hereunder and who is required to be registered pursuant to the federal *Lobbying Act*, is registered pursuant to that *Act;*

g) the Recipient has not and will not make a payment or other compensation that is contingent upon or is calculated upon the contribution hereunder or the negotiation of the whole or any part of the terms and conditions of this Agreement to any individual, or corporation or organization with which that individual is engaged in doing business with, who is registered pursuant to the federal *Lobbying Act*;

h) there are no actions, suits, investigations or other proceedings pending or, to the

knowledge of the Recipient, threatened and there is no order, judgment or decree of any court or governmental agency which could materially and adversely affect the Recipient's ability to carry out the activities contemplated by this Agreement. The Recipient will inform Canada immediately if any such action or proceedings are threatened or brought during the term of this Agreement; and

i) the Recipient is in good standing under the laws of the jurisdiction in which it is required to be registered.

5. [INTENTIONALLY OMITTED]

6. CONTRACT PROCEDURES

6.1 AWARDING OF CONTRACTS

a) The Recipient will ensure that Contracts are awarded in a way that is transparent, competitive, consistent with value-for-money principles, or in a manner otherwise acceptable to Canada, and if applicable, in accordance with the Canadian Free Trade Agreement and international trade agreements.

b) If Canada determines that the Recipient has awarded a Contract in a manner that is not in compliance with the foregoing, upon notification to the Recipient, Canada may consider the expenditures associated with the Contract to be ineligible.

6.2 CONTRACT PROVISIONS

The Recipient will ensure that all Contracts are consistent with, and incorporate, the relevant provisions of this Agreement. More specifically but without limiting the generality of the foregoing, the Recipient agrees to include terms and conditions in all Contracts to ensure that:

a) the Third Party will keep proper and accurate financial accounts and records, including but not limited to its contracts, invoices, statements, receipts, and vouchers, in respect of a Project for at least six (6) years after the Agreement End Date and that the Recipient has the contractual right to audit them;

b) all applicable labour, environmental, and human rights legislation are respected; and

c) Canada and its designated representatives, to the extent permitted by law, will at all times be permitted to inspect the terms and conditions of the Contract and any records and accounts respecting a Project and will have free access to the Project sites and to any documentation relevant for the purpose of audit.

7. [INTENTIONALLY OMITTED]

8. ABORIGINAL CONSULTATION

The Recipient agrees that:

a) Canada has determined that no legal duty to consult Aboriginal groups arises in the context of the Project.

b) The Recipient must inform Canada promptly of any changes to the Project, or otherwise, that may affect Canada's determination of the legal duty to consult for this Project.

c) If as a result of changes to the Project or otherwise, Canada determines that a legal duty to consult arises or further consultation is required, the Recipient agrees that:

i. all of Canada's obligations pursuant to this Agreement will be suspended from the moment that Canada informs the Recipient that a legal duty to consult arises;

vi. it will consult with Aboriginal groups that might be affected by the Project, explain the Project to them, including Canada's role, and will provide a report to Canada, which will include:

a. a list of all Aboriginal groups contacted;

b. a summary of all communications to date with the Aboriginal groups, indicating which groups support or object to the Project, and whether their positions are final, preliminary, or conditional in nature;

c. a summary of any issues or concerns that the Aboriginal groups have raised and an indication of how the Recipient has addressed or proposes to address those issues or concerns; and

d. any other information Canada may deem appropriate.

vii. no construction of the Project will occur and Canada has no obligation to reimburse Eligible Expenditures until Canada is satisfied that any legal duty to consult with, and where appropriate, to accommodate Aboriginal groups have been met and continue to be met.

9. CLAIMS AND PAYMENTS

9.1 PAYMENT CONDITIONS

a) Canada will not pay interest for failing to make a payment under this Agreement.

b) Canada will not pay any claims submitted after the Final Claim Date, unless otherwise accepted by Canada.

c) Canada will not pay any claims until the requirements under Section 8 (Aboriginal Consultation), if applicable, are, in Canada's opinion, satisfied to the extent possible at the date the claim is submitted to Canada.

9.2 PROGRESS CLAIMS

a) The Recipient will submit progress claims to Canada for each Project covering the Recipient's Eligible Expenditures in a form acceptable to Canada. Each progress claim must include the following:

i. a certification by a senior official designated in writing by the Recipient in the form set out in Schedule C.1 (Certificate of Compliance for Progress Claim) stating that the information submitted in support of the claim is accurate;

ii. a breakdown of Eligible Expenditures claimed, in accordance with Schedule B.2 Projects and Cashflow); and

iii. documentation to support the Eligible Expenditures claimed that is satisfactory to Canada.

b) Canada will make a payment upon review and acceptance of a progress claim, subject to the terms and conditions of the Agreement.

9.3 FINAL CLAIM AND FINAL ADJUSTMENTS

a) The Recipient will submit a final claim to Canada for each Project by the Final Claim Date covering the Recipient's Eligible Expenditures in a form acceptable to Canada. The final claim for each Project must include the following:

i. a certification by a senior official designated in writing by the Recipient in the form set out in Schedule C.2 (Certificate of Compliance for Final Claim) stating that the information submitted in support of the claim is accurate;

ii. a breakdown of Eligible Expenditures claimed in accordance with Schedule B.2 (Projects and Cashflow;

iii. confirmation of the Total Financial Assistance in accordance with Section 3.2 c) (Commitments by the Recipient) in the form set out in Schedule C.2 (Certificate of Compliance for Final Claim);

iv. a completed Declaration of Completion in accordance with Section 9.5 (Declaration of Completion);

v. upon request by Canada, any of the documents referenced in Schedule E (Declaration of Completion); and

vi. documentation to support the Eligible Expenditures claimed that is satisfactory to Canada.

b) Upon receipt of the final claim for a Project, but before issuing the final payment, the Parties will jointly carry out a final reconciliation of all claims and payments in respect

of the Project and make any adjustments required in the circumstances.

9.4 WITHHOLDING OF CONTRIBUTION

Canada may withhold up to ten percent (10%) of its contribution towards Eligible Expenditures claimed under the Agreement. Any remaining amount withheld by Canada will be released when the final adjustments have been completed under Section 9.3 (Final Claim and Final Adjustments) and the Recipient fulfills all its obligations under this Agreement.

9.5 DECLARATION OF COMPLETION

a) Prior to executing the Declaration of Completion, the Recipient will request confirmation in writing from Canada as to whether the Declaration of Completion lists all relevant documents.

b) The Declaration of Completion must be signed by an authorized official of the Recipient as deemed acceptable by Canada, and it must list all relevant documents as determined by Canada.

10. [INTENTIONALLY OMITTED]

11. AUDIT, EVALUATION AND MONITORING FOR COMPLIANCE

11.1 RECIPIENT AUDIT

Canada may, at its discretion, conduct a Recipient audit related to this Agreement during the term of this Agreement and up to two years after the Agreement End Date, in accordance with the Canadian Auditing Standards and Section 18.3 (Accounting Principles).

11.2 [INTENTIONALLY OMITTED]

11.3 EVALUATION

The Recipient agrees to cooperate with Canada in the conduct of any evaluation of the Program during or after the term of this Agreement.

11.4 CORRECTIVE ACTION

The Recipient agrees to ensure that prompt and timely corrective action is taken in response of any audit findings and recommendations conducted in accordance with this Agreement.

11.5 RECORD KEEPING

The Recipient will keep proper and accurate financial accounts and records, including but not limited to its Contracts, invoices, statements, receipts, and vouchers, in respect of the Project, for at least six (6) years after the Agreement End Date.

11.6 ACCESS

The Recipient will provide Canada and its designated representatives with reasonable and timely access, at no cost, to the Project sites, facilities, and any documentation for the purposes of audit, evaluation, inspection and monitoring compliance with this Agreement.

12. COMMUNICATIONS

12.1 COMMUNICATIONS PROTOCOL

The Parties will comply with Schedule D (Communications Protocol).

12.2 RECOGNITION OF CANADA'S CONTRIBUTION

The Recipient will acknowledge Canada's contribution in all signage and public communication produced as part of a Project or the Agreement, in a manner acceptable to Canada, unless Canada communicates in writing to the Recipient that this acknowledgement is not required.

12.3 PUBLIC INFORMATION

The Recipient acknowledges that the following may be made publicly available by Canada:

a) its name, the amount awarded by Canada, and the general nature of each Project; and

b) any evaluation or audit report and other reviews related to this Agreement.

13. INTELLECTUAL PROPERTY

a) All intellectual property that arises in the course of a Project will vest in the Recipient.

b) The Recipient will obtain the necessary authorizations, as needed, for the implementation of a Project, from third parties who may own the intellectual property rights or other rights in respect of the Project. Canada will assume no liability in respect of claims from any third party in relation to such rights and to the Agreement.

14. DISPUTE RESOLUTION

a) The Parties will keep each other informed of any issue that could be contentious by exchanging information and will, in good faith and reasonably, attempt to resolve potential disputes.

b) Where the Parties cannot agree on a resolution, the Parties may explore any alternative dispute resolution mechanisms available to them to resolve the issue.

c) Any payments related to the issue in dispute will be suspended, together with the obligations related to such issue, pending resolution.

d) The Parties agree that nothing in this section will affect, alter or modify the rights of Canada to terminate this Agreement.

15. DEFAULT

15.1 EVENTS OF DEFAULT

The following events constitute Events of Default under this Agreement:

a) the Recipient has not complied with one or more of the terms and conditions of this Agreement;

b) the Recipient has not completed a Project in accordance with the terms and conditions of this Agreement;

c) the Recipient has submitted false or misleading information to Canada or made a false or misleading representation in respect of a Project or in this Agreement, except for an error in good faith, demonstration of which is incumbent on the Recipient, to Canada's satisfaction;

d) the Recipient has neglected or failed to pay Canada any amount due in accordance with this Agreement.

15.2 DECLARATION OF DEFAULT

Canada may declare a default if:

i. In Canada's opinion, one or more of the Events of Default occurs;

ii. Canada gave notice to the Recipient of the event which constitutes an Event of Default; and

iii. the Recipient has failed, within thirty (30) business days of receipt of the notice from Canada, either to remedy the Event of Default or to notify Canada and demonstrate, to the satisfaction of Canada, that it has taken such steps as are necessary to remedy the Event of Default.

15.3 REMEDIES ON DEFAULT

In the event that Canada declares a default under Section 15.2 (Declaration of Default), Canada may exercise one or more of the following remedies, without limiting any remedy available to it at law:

a) suspend any obligation by Canada to contribute or continue to contribute funding to a Project, including any obligation to pay an amount owing prior to the date of such

suspension;

b) terminate any obligation of Canada to contribute or continue to contribute funding to a Project, including any obligation to pay any amount owing prior to the date of such termination;

c) require the Recipient to reimburse Canada all or part of the contribution paid by Canada to the Recipient;

d) terminate the Agreement.

16. LIMITATION OF LIABILITY AND INDEMNIFICATION

16.1 DEFINITION OF PERSON

In this section, “Person” includes, without limitation, a person, the Recipient, a Third Party, a corporation, or any other legal entity, and their officers, servants, employees or agents.

16.2 LIMITATION OF LIABILITY

In no event will Canada, its officers, servants, employees or agents be held liable for any damages in contract, tort (including negligence) or otherwise, for:

a) any injury to any Person, including, but not limited to, death, economic loss or infringement of rights;

b) any damage to or loss or destruction of property of any Person; or

c) any obligation of any Person, including, but not limited to, any obligation arising from a loan, capital lease or other long term obligation;

in relation to this Agreement or to any Project.

16.3 INDEMNIFICATION

The Recipient will at all times indemnify and save harmless Canada, its officers, servants, employees or agents, from and against all actions, claims, demands, losses, costs, damages, suits or other proceedings, whether in contract, tort (including negligence) or otherwise, by whomsoever brought or prosecuted in any manner based upon or occasioned by:

a) any injury to any Person, including, but not limited to, death, economic loss or any infringement of rights;

b) any damage to or loss or destruction of property of any Person; or

c) any obligation of any Person, including, but not limited to, any obligation arising from a loan, capital lease or other long term obligation;

in relation to this Agreement or to any Project, except to the extent to which such actions, claims, demands, losses, costs, damages, suits or other proceedings are caused by the negligence or breach of the Agreement by an officer, servant, employee or agent of Canada in the performance of his or her duties.

17. ASSETS

a) Assets acquired, purchased, constructed, rehabilitated, or improved, in whole or in part, through the course of a Project will be the responsibility and remain the property of the Recipient.

b) Notwithstanding any other provision of this Agreement, the Recipient will preserve, maintain, and use any Assets for the purposes of a Project, and will not dispose of any Asset during the Asset Disposal Period, unless the Recipient notifies Canada in writing and Canada consents to the Asset's disposal.

c) Unless otherwise agreed to by Canada, upon alternate use or disposal of any Asset, which includes selling, leasing and encumbering an Asset whether directly or indirectly, during the Asset Disposal Period, the Recipient will reimburse Canada, at Canada's discretion, in whole or in part, an amount of funds contributed by Canada to the Asset under this Agreement.

18. GENERAL

18.1 PUBLIC BENEFIT

The Parties acknowledge that their contributions to the Project are meant to accrue to the public benefit.

18.2 SURVIVAL

The Parties' rights and obligations which, by their nature, extend beyond the termination of this Agreement, will survive any termination of this Agreement.

18.3 ACCOUNTING PRINCIPLES

All accounting terms will have the meanings assigned to them, all calculations will be made and all financial data to be submitted will be prepared, in accordance with the Generally Accepted Accounting Principles (GAAP) in effect in Canada as defined in the Chartered Professional Accountants (CPA) Canada Handbook - Accounting or, where applicable, the CPA Canada Public Sector Accounting.

18.4 DEBTS DUE TO THE FEDERAL CROWN

Any amount owed to Canada under this Agreement by the Recipient will constitute a debt due to the federal Crown, which the Recipient will reimburse to Canada forthwith on demand.

18.5 INTEREST ON DEBTS DUE TO THE FEDERAL CROWN

Debts due to the federal Crown by the Recipient will accrue interest in accordance with the federal *Interest and Administrative Charges Regulations*.

18.6 SET-OFF BY CANADA

Any debt due to the federal Crown by the Recipient may be set-off against any amounts payable by Canada to the Recipient under this Agreement.

18.7 MEMBERS OF THE HOUSE OF COMMONS AND SENATE

No member of the House of Commons or the Senate of Canada will be admitted to any share or part of this Agreement, or to any benefit arising from it that is not otherwise available to the public. The Recipient will promptly inform Canada should it become aware of the existence of any such situation.

18.8 CONFLICT OF INTEREST

No current or former public servant or public office holder to whom any post-employment, ethics and conflict of interest legislation, guidelines, codes or policies of Canada applies will derive direct benefit from this Agreement unless the provision or receipt of such benefits is in compliance with such legislation, guidelines, policies or codes. The Recipient will promptly inform Canada should it become aware of the existence of any such situation.

18.9 NO AGENCY, PARTNERSHIP, JOINT VENTURE, ETC.

a) No provision of this Agreement and no action by the Parties will establish or be deemed to establish a partnership, joint venture, principal-agent relationship or employer-employee relationship in any way or for any purpose whatsoever between

Canada and the Recipient or between Canada and a Third Party.

b) The Recipient will not represent itself, including in any agreement with a Third Party, as a partner, employee or agent of Canada.

18.10 NO AUTHORITY TO REPRESENT

Nothing in this Agreement is to be construed as authorizing any person, including a Third Party, to contract for or to incur any obligation on behalf of Canada or to act as an agent for Canada. The Recipient will take the necessary action to ensure that any Contract between the Recipient and any Third Party contains a provision to that effect.

18.11 ASSIGNMENT

The Recipient will not transfer or assign its rights or obligations under this Agreement without the prior written consent of Canada. Any attempt by the Recipient to assign any of the rights, duties or obligations of this Agreement without Canada's express written consent is void.

18.12 COUNTERPART SIGNATURE

This Agreement may be signed in counterpart, and the signed copies will, when attached, constitute an original agreement.

18.13 SEVERABILITY

If for any reason a provision of this Agreement that is not a fundamental term of this Agreement between the Parties is found to be or becomes invalid or unenforceable, in whole or in part, and if both Parties agree, it will be deemed to be severable and will be deleted from this Agreement, but all the other terms and conditions of this Agreement will continue to be valid and enforceable.

18.14 AMENDMENTS

This Agreement, including its schedules, can only be amended in writing by the Parties.

18.15 WAIVER

A Party may waive any of its rights under this Agreement only in writing. Any tolerance or indulgence demonstrated by the Party will not constitute a waiver.

18.16 NOTICE

a) Any notice, information or required documentation provided for under this Agreement must be delivered in person or sent by mail, email, messenger or facsimile to the identified representatives of the Parties at the following coordinates, unless otherwise specified by Canada:

Canada:

Director, Transportation Infrastructure Program
Transport Canada
Place de Ville, Tower C, 19th Floor
330 Sparks Street
Ottawa, Ontario
K1A 0N5

Email: TC.RSIPITR-PASFITR.TC@tc.gc.ca

Recipient:

Janice Verhaeghe
300 Dufferin Avenue,
London, Ontario
N6A 4L9

Email: jverhaeg@london.ca

b) Such notice will be deemed to have been received:

i. in person, when delivered;

ii. if sent by mail, email or facsimile, when receipt is acknowledged by the other Party;

iii. if sent by messenger or registered mail, when the receiving Party has signed the acknowledgment of reception.

c) If a Party changes its representative or the coordinates for that representative, it will advise the other Party as soon as possible.

18.17 COMPLIANCE WITH LAWS

The Recipient will comply with all applicable laws and regulations and all requirements of regulatory bodies having jurisdiction over the subject matter of the Project.

18.18 GOVERNING LAW

This Agreement is governed by the laws applicable in the Province of Ontario.

18.19 SUCCESSORS AND ASSIGNS

This Agreement is binding upon the Parties and their respective successors and assigns.

19. SIGNATURES

This Agreement has been executed on behalf of Her Majesty the Queen in right of Canada by the Minister of Transport and on behalf of the City of London by the Mayor and City Clerk

HER MAJESTY THE QUEEN IN RIGHT OF CANADA

Per: Emilia Warriner
Director, Transportation Infrastructure Program

Date

CITY OF LONDON

Per: Matt Brown
Mayor

Date

Per: Cathy Saunders
City Clerk

Date

SCHEDULE A – ELIGIBLE AND INELIGIBLE EXPENDITURES

SCHEDULE A.1: ELIGIBLE EXPENDITURES

Eligible Expenditures must:

- be reasonable and directly related to a Project, as determined by Canada;
- must not exceed the rates described in the *Guide to Railway Charges for Crossing Maintenance and Construction* (the "Guide")
- be incurred between the date Canada received the recipient's application for Program funding and the Final Claim Date; and
- consist of the following categories of expenditures:
    - Staff salaries and benefits;
    - Purchase and lease of capital assets, technology, equipment and supplies;
    - Professional services, including accounting, translation, audit and consulting;
    - Planning, design and evaluation;
    - Engineering and environmental reviews and follow-up measures;
    - Expenditures related to construction and rehabilitation of assets (including fees paid to general contractors and labourers, materials, licenses, permits, and the rental of construction machinery and equipment, and fees paid to power supply companies);
    - Licenses and permits
    - Expenditures for Aboriginal consultations, specifically project-related consultation activities pursuant to the Crown's legal duty to consult;
    - Administrative expenditures (including general administration expenditures, rent, insurance, office equipment rental, and membership fees);
    - Travel expenditures (including the cost of accommodations, vehicle rental and kilometric rates, bus, train, airplane or taxi fares, allowances for meals and incidentals). Travel and per diem expenses cannot be more than the rates and allowances determined in the Travel Directive of the National Joint Council, available at the following link: http://www.njc-cnm.gc.ca/directive/index.php?did=10&dlabel=travel-voyage&lang=eng&merge=2&slabel=index;
    - Other costs that are, in the opinion of the Minister or his/her delegated representative, considered to be direct, reasonable, and incremental for the successful implementation of a project and have been approved in writing prior to being incurred.

For the purposes of determining Eligible Expenditures, and notwithstanding the material overhead rates set out in Schedule C to the Guide, the overhead rate applicable to pre-wired packages will be the allowance for contract overheads set out in Schedule D of the Guide.

Eligible Expenditures can be cash-equivalent expenditures associated with In-Kind Contributions. These expenditures may be reimbursed so long as the following three criteria are met:

1) The associated costs are deemed as Eligible Expenditures and have been approved by Canada;
2) The associated costs are not a donation received from a third party; and
3) The associated costs are related to goods, services or other support that would otherwise be purchased and paid for by the Recipient as essential for a Project.

In-Kind Contributions received from a third party are considered donations and may form part of the total Eligible Expenditures of a Project, but are not reimbursable.

SCHEDULE A.2: INELIGIBLE EXPENDITURES

The following expenditures shall be considered ineligible, and therefore will not be considered in the calculation of the total eligible expenditures of a Project:

- Costs incurred before the date Canada received the recipient's application for Program funding or after the Final Claim Date;
- Expenditures for provincial sales tax and Goods and Services Tax, or the Harmonized Sales Tax, where applicable, for which the Recipient is eligible for a rebate, and any other costs eligible for rebates;
- Purchase of land and/or buildings, related real estate fees, and vehicles;
- Financing charges and interest payments on loans; and
- Expenditures that have been reimbursed from other sources of funding, federal statutes or funding programs.
- Personal mileage to and from Recipient's employees' homes.

SCHEDULE B – THE PROJECTS

SCHEDULE B.1: DESCRIPTION OF PROJECTS

Description of Projects:

The Projects involve grade crossing improvements in the Province of Ontario.

Objective(s):

The objective of the Projects is to enhance public safety at the public grade crossings described in Schedule B.2 (Projects and Cashflow) to reduce the risk of collisions, fatalities and injuries.

Activities:

The Projects consists of improvements to the crossings described in Schedule B.2 (Projects and Cashflow) through undertaking the following activities:

- Relocation and installation of signage, pavement markings, approach surface resurfacing
- Median separation and vegetation removal
- Sidewalk replacement

Project Outcomes:

In order to illustrate how the Projects will contribute to rail safety, the Recipient will collect performance data and report on the following performance indicators that the Projects will contribute to:

- Number of installed new crossing warning system barrier gates;
- Number of installed cantilever structures;
- Number of new interconnection cable ducts from traffic controller to rail crossing bungalow.

This data is collected only for the purpose of performance measurement and reporting to Canadians.

SCHEDULE B.2: PROJECT AND CASHFLOW

Name of Project	Description of Project (Main technical and financial stages, location, construction methods, etc.)	Estimated Total Project Expenditures	Estimated Total Eligible Project Expenditures	Estimated Contribution by Canada	Estimated contribution to Eligible Expenditures per Party, per Fiscal Year	
					Contributor	2018-19
Project 1 - Mile 73.10 Dundas Subdivision, Gore Road	Installation of signage, pavement markings, approach surface resurfacing	$36,000.00	$36,000.00	$28,800.00	**Canada** **Recipient**	**$28,800.00** **$7,200.00**
Project 2 - Mile 77.66 Dundas Subdivision, Colborne Street	Installation of signage, pavement markings, vegetation removal, approach surface resurfacing.	$46,500.00	$46,500.00	$37,200.00	**Canada** **Recipient**	**$37,200.00** **$9,300.00**
Project 3 - Mile 0.17 Windsor Subdivision, St. George Street	Installation of signage, pavement markings, median separation, and vegetation removal.	$39,000.00	$39,000.00	$31,200.00	**Canada** **Recipient**	**$31,200.00** **$7,800.00**
Project 4 – Mile 0.05 Windsor Subdivision, Richmond Street	Installation of signage, remove old pavement markings, approach surface resurfacing, and sidewalk replacement.	$21,500.00	$21,500.00	$17,200.00	**Canada** **Recipient**	$17,200.00 **$4,300.00**
Project 5 – Mile 76.84 Dundas Subdivision, Rectory Street	Installation/relocation of signage, pavement markings, approach surface resurfacing.	$14,000.00	$14,000.00	$11,200.00	**Canada** **Recipient**	$11,200.00 **$2,800.00**
Project 6 –Mile 118.77 Guelph Subdivision, Highbury Avenue	Installation of signage, pavement markings, vegetation removal.	$8,500.00	$8,500.00	$6,800.00	**Canada** **Recipient**	**$6,800.00** **$1,700.00**
Project 7 –Mile 77.36 Dundas Subdivision, William Street	Installation of signage, pavement markings, vegetation removal.	$25,500.00	$25,500.00	$20,400.00	**Canada** **Recipient**	**$20,400.00** **$5,100.00**
Project 8 – Mile 77.51 Dundas Subdivision, Maitland Street	Relocation and installation of signage, crossing surface resurfacing including sidewalk replacement, and pavement markings.	$21,000.00	$21,000.00	$16,800.00	**Canada** **Recipient**	**$16,800.00** **$4,200.00**

Name of Project	Description of Project (Main technical and financial stages, location, construction methods, etc.)	Estimated Total Project Expenditures	Estimated Total Eligible Project Expenditures	Estimated Contribution by Canada	Estimated contribution to Eligible Expenditures per Party, per Fiscal Year	
					Contributor	**2018-19**
Project 9 – Mile 76.44 Dundas Subdivision, Egerton Street	Installation of signage, and pavement markings.	$6,000.00	$6,000.00	$4,800.00	**Canada** **Recipient**	**$4,800.00** **$1,200.00**
Project 10 – Mile 73.97 Dundas Subdivision, Clarke Road	Installation of signage, pavement markings, approach surface resurfacing, and sidewalk replacement.	$15,500.00	$15,500.00	$12,400.00	**Canada** **Recipient**	**$12,400.0** **$3,100.00**
TOTAL		**$233,500.00**	**$233,500.00**	**$186,800.00**	**Canada** **Recipient**	**$186,800.00** **$46,700.00**

For greater certainty, Canada's total contribution cannot exceed the amount set out in Section 3.1 (Contribution by Canada).

SCHEDULE C – CERTIFICATE(S) OF COMPLIANCE FOR CLAIMS

SCHEDULE C.1: CERTIFICATE OF COMPLIANCE FOR PROGRESS CLAIM

In the matter of the Agreement entered into between Her Majesty the Queen in right of Canada, as represented by the Minister of Transport, and the City of London (the "Recipient"), represented by _____(Name), concerning the Grade Crossing Improvements Project (the "Agreement").

I, _____(Name), of the City/Town of _____, Province/Territory of _____, declare as follows:

1. That I hold the position of _____ with the Recipient and as such have knowledge of the matters set forth in this declaration and believe this declaration to be true.
2. I am duly authorized by the Recipient to give this Certificate under [RECIPIENT INSERTS THE COMPLETE REFERENCE TO THE BY LAW OR INTERNAL POLICY AUTHORITY THAT ALLOWS THEM TO PROVIDE THIS CERTIFICATION] dated [DATE].
3. I have read and understood the Agreement and the progress claim submitted by the Recipient thereunder dated the same date as this Certificate and have knowledge of the business and affairs of the Recipient and have made such examinations or investigations as are necessary to give this Certificate and to ensure that the information contained herein is true and accurate.
4. The expenditures claimed are Eligible Expenditures in accordance with the Agreement.
5. The Recipient, at the date of this Certificate, has performed all covenants under the Agreement that are required to be performed by it on or prior to that date.
6. All representations and warranties of the Recipient contained in the Agreement are true and accurate in all respects at the date of this Certificate as though such representations and warranties had been made at the date of this Certificate.

Dated, this _____day of _____20___

_____
Signature

SCHEDULE C.2: CERTIFICATE OF COMPLIANCE FOR FINAL CLAIM

In the matter of the Agreement entered into between Her Majesty the Queen in right of Canada, as represented by the Minister of Transport, and the City of London (the "Recipient"), represented by _____(Name), concerning the Grade Crossing Improvements Project (the "Agreement").

I, _____(Name), of the City/Town of _____, Province/Territory of _____, declare as follows:

1. That I hold the position of _____ with the Recipient and as such have knowledge of the matters set forth in this declaration and believe this declaration to be true.
2. I am duly authorized by the Recipient to give this Certificate under [RECIPIENT INSERTS THE COMPLETE REFERENCE TO THE BY LAW OR INTERNAL POLICY AUTHORITY THAT ALLOWS THEM TO PROVIDE THIS CERTIFICATION] dated [DATE].
3. I have read and understood the Agreement and the final claim submitted by the Recipient thereunder dated the same date as this Certificate and have knowledge of the business and affairs of the Recipient and have made such examinations or investigations as are necessary to give this Certificate and to ensure that the information contained herein is true and accurate.
4. The Recipient, at the date of this Certificate, has performed all covenants under the Agreement that are required to be performed by it on or prior to that date.
5. The expenditures claimed are Eligible Expenditures in accordance with the Agreement.
6. All representations and warranties of the Recipient contained in the Agreement are true and accurate in all respects at the date of this Certificate as though such representations and warranties had been made at the date of this Certificate.
7. The Project as defined in the Agreement has been completed.

[If applicable, add:]

8. All applicable mitigation measures, accommodation measures and follow-up measures required to be performed during the Project implementation as a result of Aboriginal consultations have been implemented.
9. The Total Financial Assistance received or due for the Project in accordance with Section 3.2 c) (Commitments by the Recipient) is as follows:

   [INCLUDE ALL TOTAL FINANCIAL ASSISTANCE RECEIVED OR DUE]
10. This Certificate of Compliance does not preclude any rights of Canada to verify, audit or inspect as per the terms and conditions of the Agreement.
11. The Recipient is not entitled to payment of any amount under the Agreement, other than any amount requested by the Recipient in accordance with the Agreement on or prior to the date of this Certificate.

Dated, this _____day of _____20___

_____
Signature

SCHEDULE D – COMMUNICATIONS PROTOCOL

GENERAL

1. Canada and the Recipient agree to undertake joint communications activities and products that will enhance opportunities for open, transparent, effective and proactive communications with citizens through appropriate, continuous, and consistent public information activities that recognize the contribution of the Parties and, where applicable, any other contributor.
2. The mechanisms for such communications and public information activities and products will be determined by Canada.
3. All public information material in relation to this Agreement will be prepared jointly and in both official languages and will equitably reflect the funding of all contributors to the Project. This requirement is not needed for tendering documents; the Recipient will carry out any tendering processes in accordance with its own policies, guidelines and governing laws.

COMMUNICATING WITH THE PUBLIC

Public Information Products

The Parties may jointly develop information kits, brochures, public reports, and website material for the public about the Projects.

News Releases

A joint news release may be issued when the Agreement is signed and/or at appropriate milestones such as start of Project work or completion of the Project. A news release may include quotations from a federally, provincially, or municipally elected official or, where applicable, any other contributor. Canada must agree on these quotations.

Press Conferences, Public Announcements and Other Joint Events

The Parties will co-operate in organizing press conferences, announcements or official ceremonies. Canada should also agree on the messages and public statements at such events. No public announcement for a Project under this Agreement will be made by the Recipient or, where applicable, any other contributor, unless Canada has been informed of it at least thirty (30) business days in advance.

Either Party may organize a joint press conference. The requestor will give the other Party reasonable notice of at least thirty (30) business days of such a press conference, public announcement or joint event.

Signage

Prior to the implementation of a Project under this Agreement, and as directed by Canada, the Recipient agrees to supply, erect, and maintain signage consistent with federal/provincial identity graphics guidelines, and in both official languages specifying that the Project is financed by contributions from the Government of Canada and the Recipient or such wording as may have been or may be agreed upon by Canada.

COMMUNICATION COSTS

The eligibility of costs related to communication activities that provide public information on this Agreement will be subject to Schedule A (Eligible and Ineligible Expenditures) and must be agreed to in advance by Canada.

SCHEDULE E – DECLARATION OF COMPLETION

In the matter of the Agreement entered into between Her Majesty the Queen in right of Canada, as represented by the Minister of Transport, and the City of London (the "Recipient"), represented by _____(Name), concerning the Grade Crossing Improvements Project (the "Agreement").

I, _____(Name), of the City/Town of _____,

Province/Territory of _____, declare as follows:

1. I hold the position of _____with the Recipient and as such have knowledge of the matters set forth in this declaration and believe this declaration to be true.

2.

a) I have received the following documents for the [Grade Crossing] Project:

   i. [LIST NAME OF RELEVANT DOCUMENT(S), e.g. Certificate of Completion, Certificate of Performance, Occupancy Permit, etc.] signed by _____ (Name), a _____ (Profession, e.g. professional engineer, professional architect or other applicable professional) for the Project.

   ii. [ADD SAME TEXT AS IN i FOR EACH DOCUMENT]

b) Based on the above documents and the representations made to me by the professionals identified in section 2(a) above, I declare to the best of my knowledge and belief that the Project has been completed, as described in Schedule B.1 (Description of Projects), as defined in the Agreement, on the _____ day of the _____ 20__.

[Insert #3, if applicable:]

3. I have received the following documents and based on these documents and representations made to me by the professionals identified below, I declare to the best of my knowledge and belief that the Project conforms with the guidelines referenced in Section 3.7 (Guidelines) of the Agreement:

   i. [LIST NAME OF RELEVANT DOCUMENT(S), e.g. Certificate of Completion, Certificate of Performance, Occupancy Permit, etc.] signed by _____ (Name), a _____ (Profession, e.g. professional engineer, professional architect or other applicable professional) for the Project.

   ii. [ADD SAME TEXT AS IN i FOR EACH DOCUMENT]

4. All terms and conditions of the Agreement that are required to be met as of the date of this declaration have been met.

Declared at _____ (City/Town), in _____ (Province/Territory)

this _____ day of _____, 20_____.

_____

Signature

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**COMPLETE STREETS DESIGN MANUAL**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the City of London Complete Streets Design Manual:

(a) The Complete Streets Design Manual, as summarized in the Executive Summary attached hereto as Appendix A, **BE APPROVED** as the basis for planning and design of City streets; it being noted that the Manual will be subject to future periodic updates; and,

(b) The Design Specifications and Requirements Manual **BE UPDATED** based on the Complete Streets Design Manual and in coordination with the Design Specifications and Requirements Manual update process.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Planning and Environment Committee – June 13, 2016 – The London Plan
- Civic Works Committee – November 29, 2016 – Complete Streets Design Manual, Appointment of Consulting Engineer

2015-19 STRATEGIC PLAN

The City of London Complete Streets Design Manual supports the 2015-19 Strategic Plan through the strategic focus area of Building a Sustainable City. Municipal Council identified a strategy to implement and enhance safe mobility choices for cyclists, pedestrians, transit users, and drivers through the provision of complete streets.

BACKGROUND

Purpose

This report seeks Municipal Council approval of the Complete Streets Design Manual and direction for staff to update the Design Specifications and Requirements Manual based on the recommendations in the Complete Streets Design Manual and in coordination with the Design Specifications and Requirements Manual updating process that includes industry consultation and considers influences from other processes.

Context

The development of the Complete Streets Design Manual builds upon the London Plan linkages of land use and transportation through the reclassification of street types. The purpose of the manual is to provide design guidance to create the infrastructure that supports the goals and objectives of the street types. The Manual is intended to provide high-order design guidance supplemented by existing design tools.

On November 29, 2016, Municipal Council approved the appointment of MMM Group Limited / WSP to develop the Complete Streets Design Manual. WSP prepared the content of the Manual and assisted with internal and external consultation.

Adopting a complete streets approach to transportation planning and design in London is supported by a number of policies at the provincial and municipal level. These policies provide the direction for the vision, goals and objectives of the Complete Streets Design Manual. Listed below briefly are the most relevant local and provincial policies and City initiatives that have informed and influenced the development of the manual:

- City of London Strategic Plan Convenient and Connected Mobility Choices Strategies
- Provincial Policy Statement (2014) policies that outline the importance of using planning and design measures to provide viable transportation options beyond single-occupant motor vehicle travel
- Accessibility for Ontarians with Disabilities Act (AODA)
- The London Plan's multi-modal vision for the City's street network
- Smart Moves 2030 Transportation Master Plan objectives including the enhancement of active modes and transit via policy, programming, and complete streets design
- London's Rapid Transit initiative
- London ON Bikes Cycling Master Plan
- Vision Zero – London's Road Safety Strategy
- MTO Cycling Strategy (2013) explicit support for complete streets implementation throughout the province
- Our Move Forward, London's Downtown Plan
- The London Urban Forest Strategy

As part of the development of the Complete Streets Design Manual, several precedent complete streets policies and design guidance from comparable mid-size cities and large cities were reviewed:

- Niagara Region Complete Streets Design Guidelines - 2017
- City of Waterloo Complete Streets Policy - 2011
- City of Toronto Complete Streets Design Guideline – 2016
- City of Dallas Complete Streets Design Manual – 2016

DISCUSSION

Vision for Complete Streets in London

Streets in London will meet the needs of a wide range of users as defined by the place type, feature high-quality pedestrian environments, and integrate seamlessly with transit services, cycling networks, and automobile users. London's streets will be designed for connectivity and support the use of active and sustainable modes of transportation, and also strongly consider the needs of utility and maintenance providers within the right-of-way. With this balance of modes, users, and places in mind, all future construction, reconstruction, and rehabilitation projects for streets – both large and small – in London will be influenced by principles of "completeness" in both planning and design.

What are Complete Streets?

The London Plan states that "Complete streets are those that are designed to support many different forms of mobility. Complete streets provide physical environments that make all forms of mobility safe, attractive, comfortable and efficient. Complete streets also provide a positive physical environment that supports the form of development that is planned for, or exists, adjacent to the street. In some cases, complete streets may also incorporate corridors for wildlife movement".

Stakeholder Consultation

Key stakeholders were engaged throughout the development of the Manual in order to inform and guide the efforts for the development of the Complete Streets Design Manual. An interactive workshop with key stakeholders was held early in the study on June 2, 2017 to provide input in the early stages of the study. Concepts of complete streets were introduced and participants were able to provide input regarding the direction of Manual. Workshop invitations were extended to a broad range of organizations from the private sector, public sector, special interest stakeholder groups, and City staff. A total of 31 participants attended the workshop, representing the following organizations:

- Accessibility Advisory Committee
- Argyle Business Improvement Association (BIA)
- Bell Canada
- Can-Bike
- City of London Water Engineering
- City of London Development Services
- Cycling Advisory Committee
- Downtown London BIA

- Hyde Park Business Association
- London Development Institute (LDI)
- London Environmental Network
- London Fire Department
- London Hydro
- London Middlesex Road Safety Committee
- London Transit Commission
- Middlesex London Health Unit
- Start Communications
- Tree and Forests Advisory Committee
- Union Gas

At a later stage of the study, follow-up presentations on the draft Manual were provided to a number of groups and committees in order to ensure the Manual meets the objectives set out at the stakeholder workshop:

- Transportation Advisory Committee (April 24, 2018)
- DC External Stakeholder Committee (May 10, 2018 & June 21, 2018)
- Cycling Advisory Committee (May 16, 2018)
- Diversity, Inclusion, & Anti-Oppression Advisory Committee (May 17, 2018)
- Utility Coordinating Committee (May 17, 2018)
- Trees and Forests Advisory Committee (May 23, 2018)
- Accessibility Advisory Committee (May 24, 2018)
- Age Friendly London (May 31, 2018)
- Building and Developer Liaison Forum (June 1, 2018)

Since the Complete Streets Design Manual will be utilized by individuals with a variety of interests, representatives from different service areas including Transportation Planning & Design, Planning (Urban Design & Urban Forestry), Development Services, Construction Administration, Roadside Operations, Water Engineering, Stormwater Management, and Wastewater & Drainage Engineering were involved in the process and provided ongoing feedback throughout the development of the Manual.

A webpage was created on the City website for the Complete Streets Design Manual and the draft report was posted for public review and feedback prior to finalization. A public advertisement was also published in the Londoner requesting public feedback on the draft Manual.

Highlights from the Manual

The Executive Summary of the Complete Streets Design Manual can be found in the attached Appendix A and the entire document is linked here: http://www.london.ca/residents/Roads-Transportation/Transportation-Planning/Pages/Complete-Streets-.aspx

The Complete Streets Design Manual establishes street cross section design parameters based upon the London Plan street context and place types. The Manual serves as a valuable resource for integrating all of these functions and has been written for all practitioners, advocates and citizens involved in the street design process. Application of the complete streets design parameters within future designs will ensure

that Council's goals for the function and the character of the street are met. The Manual consists of six chapters which are outlined below.

Chapter 1: Complete Streets: Vision and Principles

This chapter sets the stage for complete streets design and includes:

- Introduction to Complete Streets and purpose of the Manual
- Review of Complete Streets Policies in London
- The Vision for Complete Streets in London
- Design / Core Principles for Complete Streets

VISION ZERO LONDON
ROAD SAFETY STRATEGY

Chapter 2: Elements of Complete Streets

Chapter 2 introduces the range of possible design features that enhance the safety, comfort, and convenience of travel for each mode of transportation and support design for place-making, green infrastructure, and utilities. It includes tools for:

- Pedestrian Facility Design
- Cycling Facility Design
- Transit Facility Design
- Motor Vehicles
- Green Infrastructure
- Utilities and Municipal Services

Chapter 3: Undertaking Complete Streets Design

This chapter focuses on how the process of street design can be adapted to reflect the complete streets approach and it includes:

- Process Overview
- Planning
- Conceptualizing
- Designing
- Implementing
- Monitoring

In order to achieve a complete streets vision, a comprehensive process that spans from the initial planning and prioritization stage to project implementation and monitoring is required. City staff and consultants who are incorporating complete streets elements into capital projects for new construction, reconstruction, or rehabilitation will be required to complete the following five stage process:

- **Plan:** Identify and prioritize candidate complete streets and begin scoping a project.
- **Conceptualize:** Envision what the complete street design could look like, engage the internal and external stakeholders necessary to support the project, and establish design priorities.
- **Design:** complete the preliminary and detailed design, balancing the trade-offs, priorities, and inputs from stakeholders and project objectives.
- **Implement:** Tender and construct project while communicating with stakeholders.
- **Monitor:** Evaluate the performance of complete streets and integrate lessons learned into future projects.

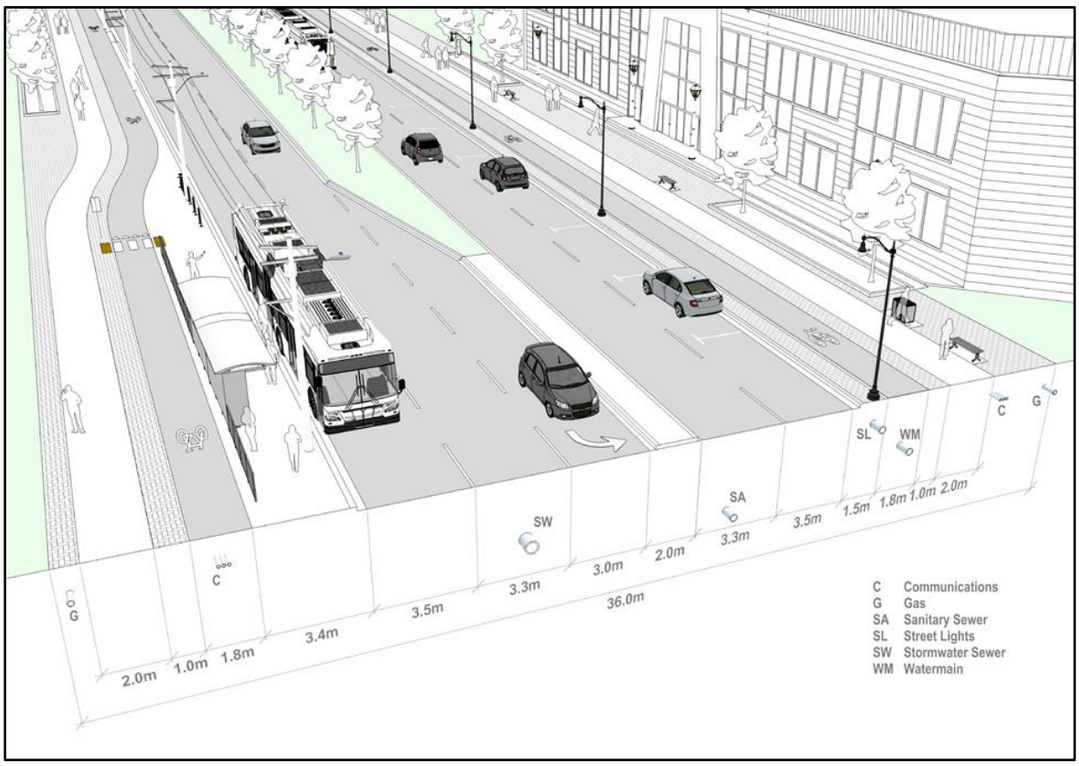
Chapter 4: Street Design

Chapter 4 illustrates conceptual cross sections for each street classification, as defined in the London Plan. For each street type, a three-dimensional rendering is provided showing how the space in the right-of-way should be allocated and how individual street elements are integrated to form a complete street.

The London Plan introduced a table which gives direction on which design features should be included on each type of street classification. The Complete Streets Design Manual turns this table into cross sections for each street classification illustrating how the various aspects of street design can fit together. This chapter includes design guidance for the following street types:

- Rapid Transit Boulevards
- Urban Thoroughfares
- Civic Boulevards
- Main Streets
- Neighbourhood Connectors
- Neighbourhood Streets
- Rural Thoroughfares
- Rural Connectors

Below is an example of a Civic Boulevard typical cross section. Civic Boulevards (e.g., Adelaide Street or Commissioners Road) provide multi-modal connections between different neighbourhoods across the city including downtown.



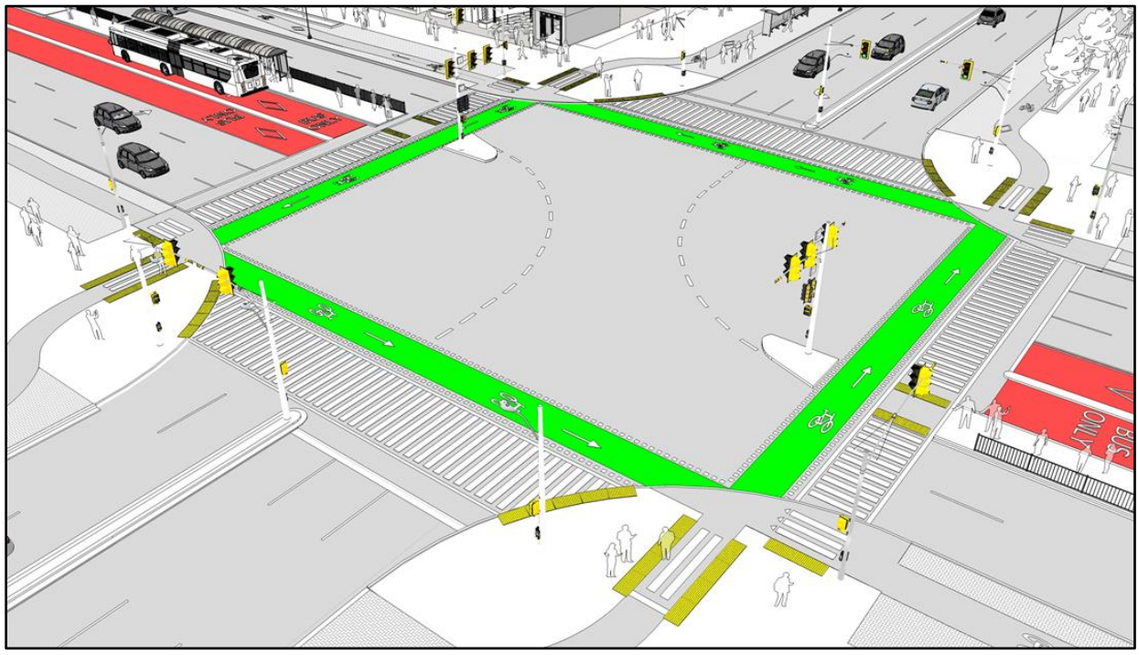
Civic Boulevard Typical Cross-Section

Chapter 5: Street Design for Intersections

Chapter 5 provides examples for intersection treatments and illustrates how different street classifications would intersect. Intersections have greater potential for conflict than mid-block locations, as such different strategies to inform intersection design and mitigate conflicts were developed. This chapter includes design guidance for the following intersection types:

- Rapid Transit Boulevard Intersecting a Main Street
- Urban Thoroughfare intersecting a Civic Boulevard (Signalized)
- Urban Thoroughfare Intersecting a Civic Boulevard (Roundabout)
- Urban Thoroughfare Intersecting a Neighbourhood Connector
- Civic Boulevard Intersecting a Neighbourhood Street

Below is an example of a Rapid Transit Boulevard intersecting a Main Street. This intersection rendering highlights several of the features that are unique to the Rapid Transit Boulevard street type with its centre running bus rapid transit design where transit is given a high priority, intersecting a Main Street. The pedestrian realm is given a high priority for both these street types.



Rapid Transit Boulevard Intersecting a Main Street

Chapter 6: Moving Forward with Complete Streets

Chapter 6 provides methods used to measure performance of complete streets projects. These include safety, accessibility, sustainability, connectivity, vitality, and support for multi-modal travel. Analysis that is undertaken should be relevant to specific projects, consistent across projects (to facilitate cross-project evaluation) and directly inform planning and design.

Implications

Financial

Transportation projects in the City are already being designed and constructed with the complete streets philosophy in mind. The role of the Manual is to improve, standardize and formalize this design philosophy. In broad terms, the Manual recommendations will have a negligible impact on costs with some exceptions. Narrower lane widths are proposed to control driver speeds which can reduce costs. Separation of cycling facilities into the boulevard on major roads can also reduce the cost of these facilities slightly. Slightly increased sidewalk widths and locally improved cycling facilities potentially offset these cost reductions.

The Complete Streets Manual recommendations have been integrated into the creation of the Development Charges Background Study currently underway to support the 2019 bylaw. The results of the cost analysis for the development charges project costing suggests that the manual recommendations have a negligible influence on the major roadworks program costs. Given the major roadworks represents the majority of Transportation costs, the Manual will have a negligible impact on the development charge rate.

The current Development Charges Bylaw supports active transportation with a DC contribution to the cycling facilities annual program. The Complete Streets Manual recommends bike lanes on some neighbourhood connector streets (primary collectors) subject to a complementary Cycling Master Plan update to identify these routes. The additional cost due to the wider pavement width to accommodate the bike lanes are

proposed to be claimable from the CSRF annual program. This will create some additional incremental pressure on this annual program.

Reconstruction projects supported by rate-based lifecycle renewal accounts will experience similar trade-offs and negligible cost impacts. However, the project management transition from reinstating existing conditions to a complete streets approach that has been underway for several years does generate additional community interest in projects, scrutiny of designs and pressure on project management and staff resources. Implementation of complete streets improvements such as revised street widths or additional sidewalks in established neighbourhoods commonly get contentious.

New Developments

As stated earlier, the Complete Streets Design Manual establishes street cross section design parameters based upon the London Plan street context and place types. Some corridors like Neighbourhood Streets accommodate predominantly residential land use and are strongly associated with the Neighbourhood Place Type detailed in the London Plan. The City's vision for these corridors includes narrow travel lanes and low volumes of traffic, vibrant community life, and street design that supports active transportation and transit connections to essential local amenities. The Complete Streets Design Manual takes direction from The London Plan and proposes sidewalks on both sides of Neighbourhood Streets. This London Plan policy is currently subject to appeal and the Complete Streets Design Manual will be updated to comply with any OMB decisions. The implementation of this specific complete streets update to the Design Specifications and Requirements Manual is not proposed for implementation until the policy is in effect.

The Complete Streets Design Manual also recommends the construction of barrier curbs on neighbourhood streets to provide better separation between motor vehicles and pedestrians and to reduce boulevard snow plow damage. Semi-mountable curb has been permitted on neighbourhood streets and some neighbourhood connectors in the past which reduces road safety and results in complaints from residents related to vehicles leaving the road and driving on the boulevard. Discussions with the development industry on this topic have resulted in agreement to a phased in implementation of this new standard which has been integrated into the recent Design Specifications and Requirements Manual update.

Property Requirements

The London Plan introduced a table containing eight street classifications and provides direction on which design features should be included on each type of street classification. The London Plan identifies right-of-way widths for each street type. The Complete Streets Design Manual illustrates with cross sections how the various aspects of street design can fit together. This exercise validates and confirms the ROW widths in The London Plan for application to developments and associated road widening dedications.

The Manual provides considerations for project designers of reconstruction projects to assess existing and proposed conditions of existing road corridors based on relative priority of each use of the particular street type. The tools identified in the Manual, will allow staff to look for ways to mitigate and optimize property impacts when designing reconstructions of existing streets.

CONCLUSION

The London Complete Streets Design Manual is a tool that will change the way streets are designed in London. The complete streets approach is about considering the needs of pedestrians, cyclists, transit riders, and motorists and building streets that balance these needs, prioritize road safety and compliment the surrounding land use. There are a number of local policies that support the Complete Streets Design Manual, including the London Plan, the Transportation Master Plan, and Vision Zero.

The Complete Streets Design Manual will be for everyone responsible for infrastructure on City streets including City staff, developers, consultants and utility companies. Londoners with a passion for improving the character of their community also have an interest. Significant internal and external stakeholder consultation was completed through workshops, interactive presentations and document review in order to ensure the goals and vision of interested participants were incorporated.

Complete Streets Design Manual will be a powerful tool that practitioners, advocates, and all Londoners can use to transform the way streets are designed and to achieve city-building visions.

Acknowledgements

Michelle Morris, Engineer In Training and Maged Elmadhoon, P.Eng. Traffic & Transportation Engineer lead the development of the manual.

The project team included City representatives from Environmental and Engineering Services (Transportation Planning & Design, Construction Administration, Roadway Lighting and Traffic Control, Road Operations, Water Engineering, Stormwater Management and Wastewater & Drainage Engineering) Planning (Urban Design and Urban Forestry), Development & Compliance Services.

SUBMITTED BY:	**RECOMMENDED BY:**
DOUG MACRAE, P. ENG., MPA **DIVISION MANAGER** **TRANSPORTATION PLANNING & DESIGN**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**

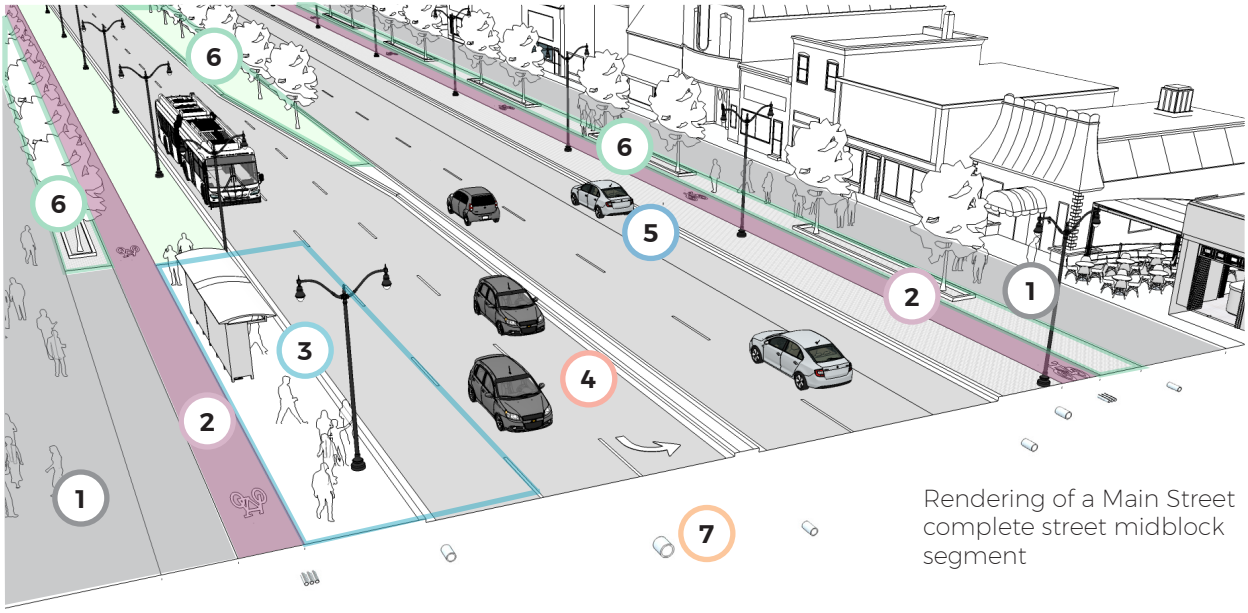
Attach: Appendix A – Executive Summary, Complete Streets Design Manual

cc: John Fleming, Managing Director, Planning and City Planner
George Kotsifas, Managing Director, Development & Compliance Services and Chief Building Official
Dave McLaughlin; WSP (100 Commerce Valley Drive West, Thornhill, ON, L3T 0A1)

LONDON COMPLETE STREETS DESIGN MANUAL
EXECUTIVE SUMMARY

Streets are vital components of all cities. They allow us to get to work and school, run errands, participate in cultural and recreational activities, and live our daily lives. They are the connective tissue of our city and facilitate commercial and social activity. They also contribute to a beautiful cityscape and provide the pathway for an evening stroll or a morning bike ride. They must allow trucks to deliver goods to our stores, enable our fire, police and paramedic services to respond to emergencies and save lives, provide the network for London Transit Commission (LTC) buses to serve Londoners, and provide critical corridors for electricity, telecommunications, water, and natural gas utilities.

The complete streets approach is about considering the needs of pedestrians, cyclists, transit riders, and motorists and building streets that balance these needs and prioritize road safety. Beyond these mobility functions, the complete streets approach prioritizes "placemaking", the creation of places in our streets that contribute to healthy ecosystems, social inclusion, and vibrant business activity. These priorities need to be balanced with the need to accommodate critical utilities and allow for efficient maintenance and operations.



Rendering of a Main Street complete street midblock segment

1 **Walking**

Greater sidewalk width where higher volumes of pedestrians are expected, higher quality design elements in the public realm, lighting and universal accessibility features to ensure ease of use

2 **Cycling**

Consideration of on-street cycling facilities and increased cyclist priority if on the cycling network

3 **Transit**

Comfort and amenities for waiting passengers as well as design elements to speed up transit service

4 **Through-Movement (Vehicles and Freight)**

Ensure efficient through-movement of vehicles while balancing priorities such as building a sense of place and support for all street users

5 **Parking**

Provision of adequate on-street parking where appropriate

6 **Green Infrastructure**

Design features that promote environmental sustainability

7 **Utilities**

Accommodation of utilities above and below ground

The role of the Complete Streets Design Manual (CSDM)

This manual is a transformative tool that will guide the way streets are designed in London. It serves as a valuable resource for integrating the various functions of our streets and has been written for all practitioners, advocates and citizens involved in the street design process.

A Citizen's Guide has been included in the CSDM. It provides an overview of what complete streets are, why London is taking this approach, supporting policies, and ways of getting involved.

Why Complete Streets?

Preparations are underway to support a new era of rapid transit and city-building and the City of London is encouraging the design and development of streets that more effectively meet the needs of a wider variety of users. Cycling, walking, and public transit are key components of this strategy, as is improving health and activity levels, reducing traffic congestion and supporting the character and legacy of London's neighbourhoods.

The City's official plan, The London Plan, as well as the transportation master plan (TMP), Smart Moves, provide clear policy direction that the planning and design of future streets, as well as the renewal of existing streets should be supportive of all road users, and be "complete." Furthermore, in 2017 the City of London adopted the Vision Zero principles, which are based on the notion that no loss of life as a result of traffic-related collisions is acceptable.

The following are key policy priority areas for complete streets:

Strive for Vision Zero

The City will use an evidence-based decision-making framework to assess, guide, and improve traffic safety. The framework will take into account the interaction of all aspects of the transportation system.

Create pedestrian-friendly environments

The City will work to create neighbourhoods where residents are readily able to reach essential destinations such as grocery stores, parks, and transit stops by foot. Streets will be designed such that there is a sufficiently wide pedestrian clearway, frequent crossing opportunities, accessibility features such as audible signals and tactile walking surface indicators, and various public realm amenities such as seating, street trees, and waste receptacles.

Consider all users and functions of a street

In addition to accommodating pedestrians, cyclists, transit riders, and motorists, streets must also be designed for maintenance and snow clearing operations, curbside waste collection, and to accommodate various above and below ground utilities.

Integrate complete streets design principles into the decision-making process

Several tools were developed to ensure that all users and functions of a street are considered whenever a street is constructed, reconstructed, or rehabilitated.

Coordinate built form decisions with transportation decisions

Planning and design of streets will incorporate and be responsive to the appropriate use, intensity, and form along each street classification, as set out in The London Plan.

Engage residents and stakeholders in the Complete Streets process.

Guided by the CSDM, the City will inform and engage residents of the multi-faceted nature of street design, as well as engage stakeholders and provide practitioners and decision makers with appropriate information such that design efforts are coordinated and the City's complete streets vision can be achieved.

THE VISION FOR COMPLETE STREETS IN LONDON

London's vision for complete streets is informed by policies 211-218 of The London Plan as well as best practices in the field of complete streets planning and design. The following statement captures the overarching vision for the London Complete Streets Design Manual:

1. London's streets will be designed and upgraded to be more complete.
2. This means that streets in London will meet the needs of a wide range of users as defined by the place type, feature high-quality pedestrian environments, and integrate seamlessly with transit services, cycling networks, and automobile users.
3. London's streets will be designed for connectivity and support the use of active and sustainable modes of transportation, and also strongly consider the needs of utility and maintenance providers within the right-of-way.
4. With this balance of modes, users, and places in mind, all future construction, reconstruction, and rehabilitation projects for streets – both large and small – in London will be influenced by principles of "completeness" in both planning and design.

This vision is the foundation for the design guidance and process tools contained in this Manual. The City's core principles for complete streets build directly upon this vision.

COMPLETE STREETS DESIGN PRINCIPLES

Design principles help establish consistent decision-making parameters when undertaking complete street design activities. The City's design principles for complete streets include:

- **Prioritize safe and accessible options for people** such that on any street, regardless of the priority mode, all users should feel safe. This reflects the reality that pedestrians and cyclists are more vulnerable than vehicular road users, and that supporting active modes of transportation often results in health benefits, to both individuals and the community. Streets should be designed to be inclusive and accessible and that the various needs of users of all ages and abilities are accommodated to the maximum degree possible.
- **Ensure context sensitivity** such that land use and the adjacent transportation infrastructure are integrated where appropriate and supportive of each other. The design recommendations for each street type recognize important neighbourhood characteristics (including established land uses and functions). This includes the consideration of the civic functions performed by different streets in London such as Gateway Streets, Rapid Transit Boulevards, and designated Heritage Conservation Districts.
- **Embed sustainability** into the design of streets through minimizing environmental impacts and emissions and supporting energy efficiency. This primarily includes prioritizing active modes of transportation such as walking and cycling. Ecological and urban resilience features such as trees, planters, vegetation, and low impact development elements that facilitate groundwater recharge should also be considered. Decisions should consider the lifespan of the street, and be cost-effective, avoiding

undue short- or long-term financial burden on the City for construction, operations, and maintenance.

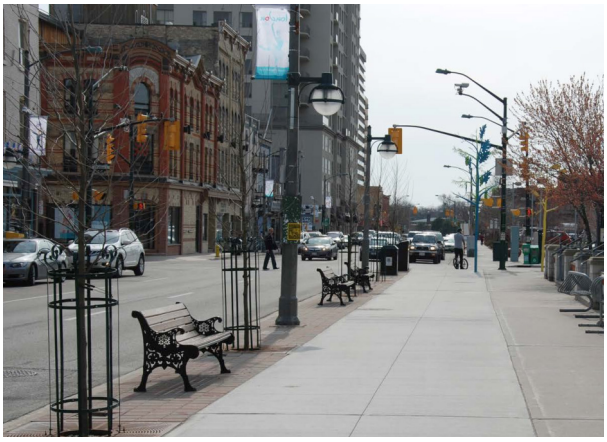
- **Prioritize connectivity** by designing complete streets and communities with block sizes, building orientations, neighbourhood configurations, and street patterns that maximize connectivity for pedestrians, cyclists, and transit users. This includes consideration of new connections and greenways that allow more residents to be within a ten minute walk of major civic and community facilities.
- **Emphasize vitality** such that new and renewed streets attract pedestrians with an enhanced sense of place, benefiting local commuters, businesses, and property owners. Whether out for a relaxing stroll, running errands, or meeting with friends, pedestrians bring economic and social activity to London's streets.

DESIGN GUIDANCE

Complete streets design features enhance the safety, comfort, and convenience of travel for each user group and support design for place-making, green infrastructure, and utilities. Readers who are less familiar with a specific aspect of street design, such as the design of pedestrian facilities for example, may find the relevant section of Chapter 2 to be a helpful introduction. For readers with more expertise in a specific area, the associated section may serve to highlight how street design is evolving to become more complete.

Pedestrian realm and place design considerations

- Accessibility, comfort, connectivity, and safety;
- Sufficient clearway widths to meet demand, provide pedestrian comfort, and enhance the public realm;
- Intersection and midblock crossing design treatments including geometric design guidance, pavement markings, signage, and lighting systems; and
- Public realm amenities such as lighting, urban tree canopy, and seating.



A variety of **pedestrian amenities** including seating, pedestrian-scale lighting, waste receptacles, and trees positioined adjacent to the pedestrian clearway in London.

Cycling facility design considerations

- Context- and user-sensitive facility types that are appropriate for adjacent motor vehicle speeds and volumes, land use, and parking, among other factors;
- Continuity and wayfinding to establish a cohesive network of cycling routes; and
- Supportive facilities such as bicycle parking, left turn queue boxes, and property access crossing treatments.

Conventional bicycle lane in London.

Transit facility design

- Prioritization of transit vehicles on all transit routes within the Primary Transit Area (PTA) through dedicated lanes, queue jump lanes, and transit signal priority; and
- A comfortable user experience at stops through the integration of seating, lighting, shelter, and information.

Motor vehicle and freight facility design

- Selection of an appropriate design vehicle and design speed based on context and consideration for vulnerable road users; and
- Appropriate design parameters such as lane width, curb radii, intersection control, curbside parking and loading, and traffic calming.

Green infrastructure considerations

- Treatments to reduce, delay, and treat stormwater runoff, mitigate the urban heat island effect, and support sustainable transportation choices; and
- Appropriate integration of street trees and other plantings.

Utilities and municipal services considerations

- Integrating surface-level priorities and uses with below- and above-grade utility requirement; and
- Facilitating access to below-grade utilities.

Design guidance for pedestrian, cycling, transit, and motor vehicle facilities is provided in Chapter 2 of the CSDM. Chapter 2 also contains a review of green infrastructure design and utility integration.

An LTC bus crossing a **raised intersection**.

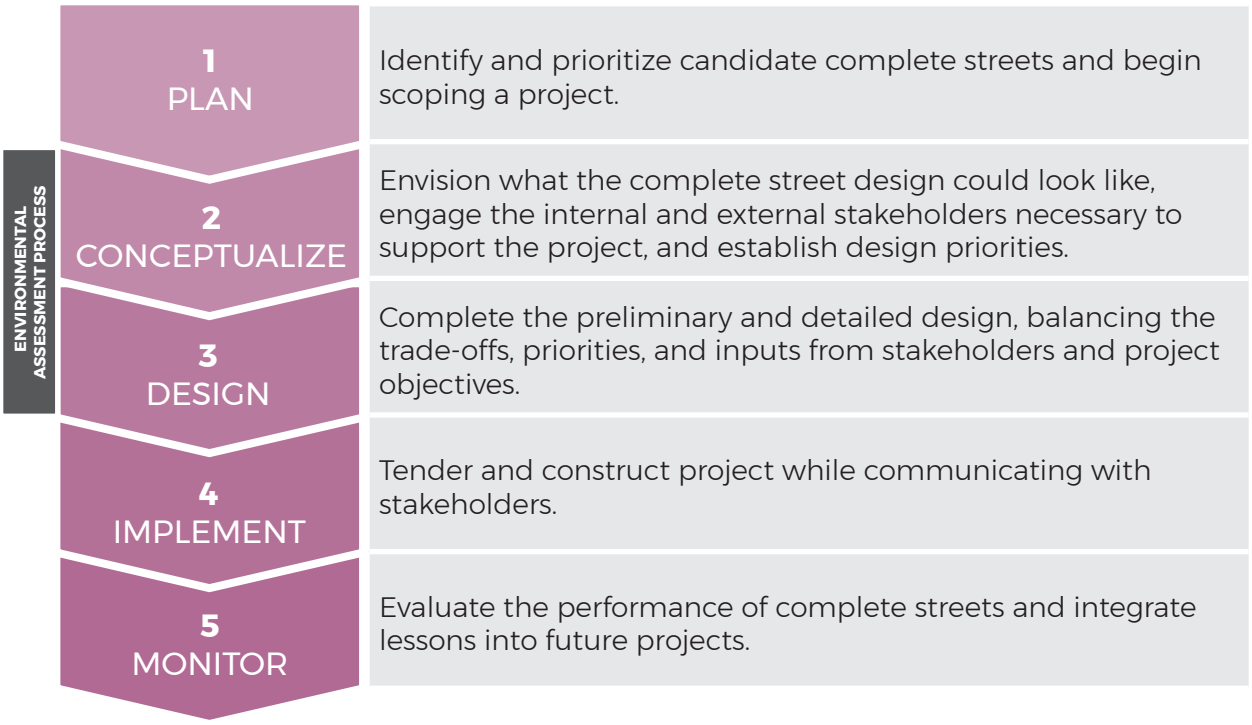
A **planted median** provides aesthetic and stormwater management benefits (London).

Before/After LED lighting upgrade shown (King St in London). LEDs are more energy efficient and provide better quality lighting.

THE DESIGN PROCESS

Achieving the City's complete streets vision requires a comprehensive process that spans from the initial planning and prioritization stage to project implementation and monitoring. City staff and engineering consultants will be incorporating complete streets elements into capital projects for new construction, reconstruction or rehabilitation.

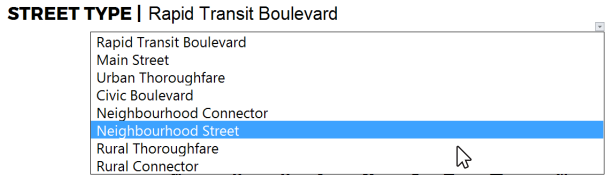
The following workflow summarizes how staff and consultants will integrate complete streets into each stage of the planning, design and implementation process. This workflow draws on existing processes such as the Capital Coordinating Committee (C3) Process and the Environmental Assessment process and indicates how a complete streets lens can be applied at each stage.



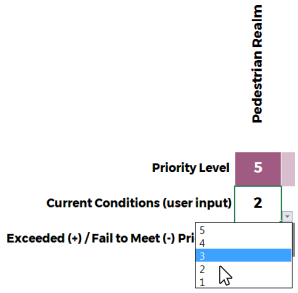
Street design projects that are led by developers are subject to the City's File Manager review process for development applications. This process ensures that complete streets design principles are incorporated into new development sites and subdivisions. The five-stage complete streets design process (summarized above) and the File Manager review process for development applications (included in Chapter 3) have been integrated at key review milestones to ensure that new development plans embrace complete streets principles.

Chapter 3 includes several tools to assess the relative completeness of a street, scope street improvement projects, make design decisions in constrained corridors, review conceptual complete street designs, and engage stakeholders. Practitioners can use this chapter to ensure that complete streets considerations are integrated at the appropriate project stage and to understand expectations for the review process.

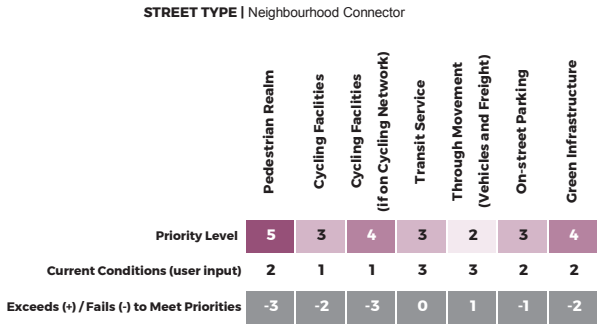
An example assessment using the Complete Street Audit tool is shown below. This tool allows staff and designers to assess existing or proposed conditions of a corridor based on the relative priority of each use for the particular street type.



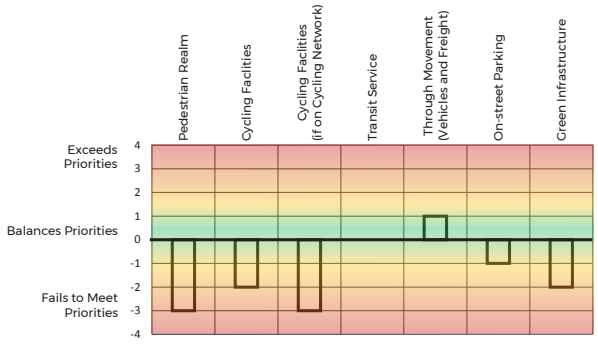
1 Select street type



2 Rate street elements



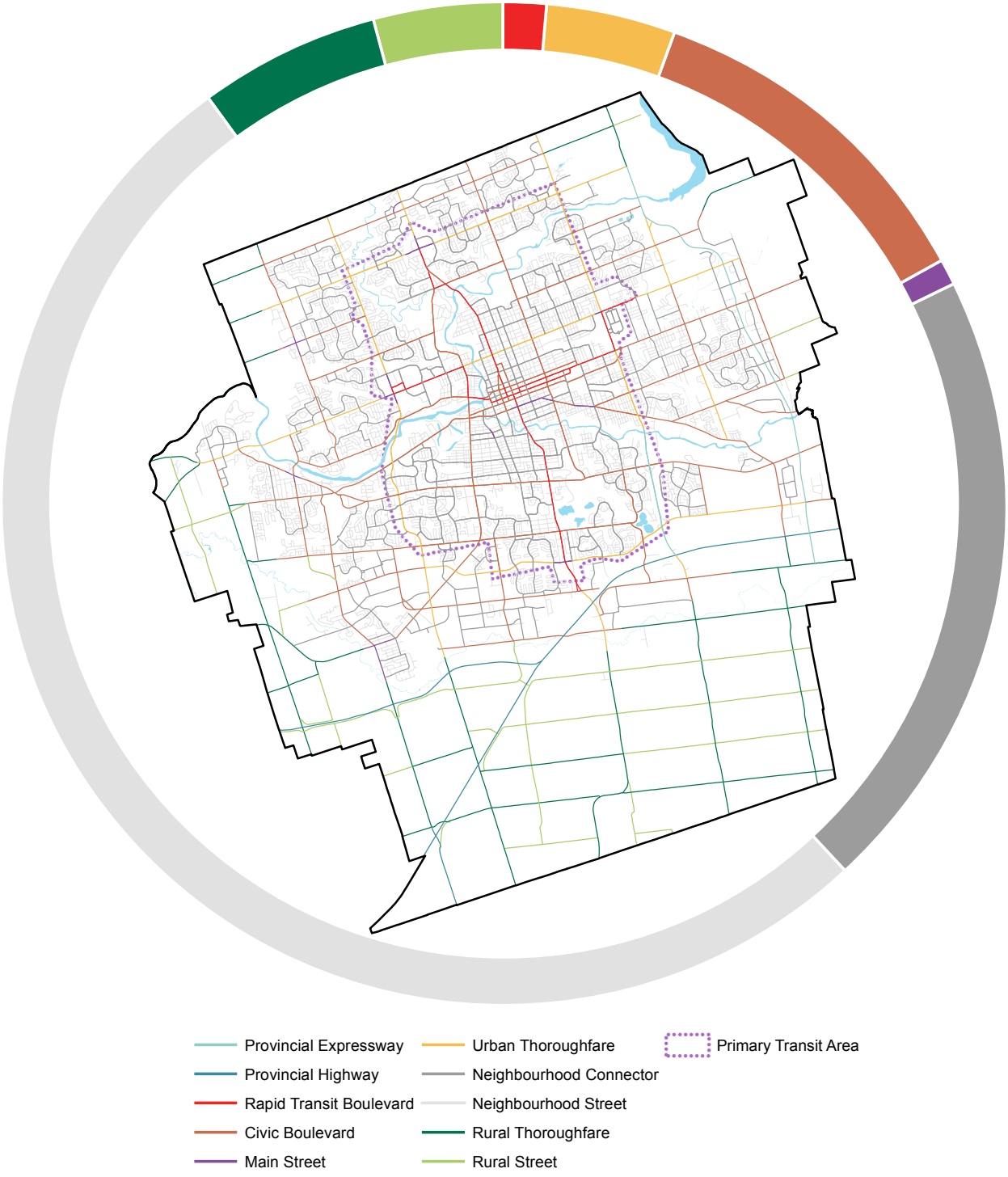
3 Results for Neighbourhood Collector



TYPES OF COMPLETE STREETS

Streets provide both a mobility function and a place function. The mobility function is about moving people whereas the place function is about attracting people. The relative importance of these two functions varies for each street.

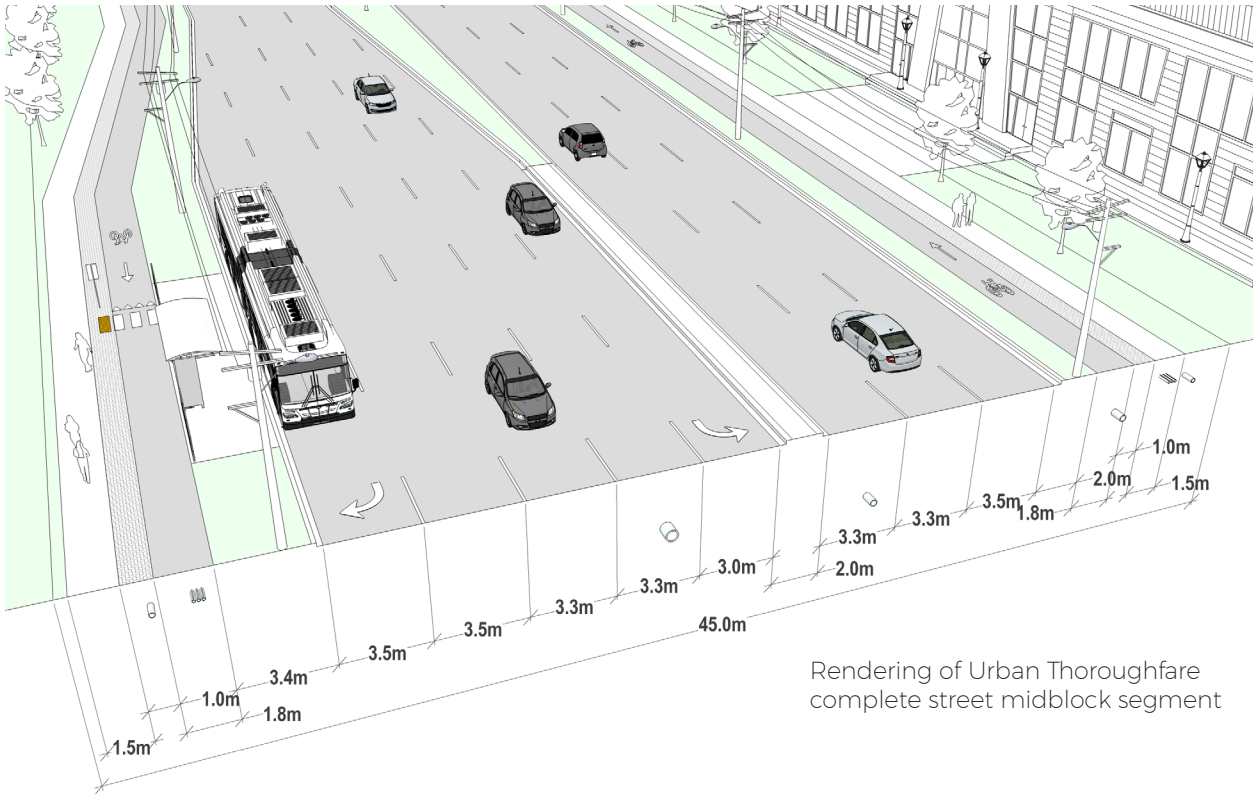
The London Plan designates the street type for each street in the city.



Map of complete street typologies for the City of London

Note: This figure was draft at the time this manual was prepared and is subject to appeal and revision.

Some streets, such as Neighbourhood Streets, provide a quiet environment where neighbours get to know each other on the sidewalk and kids can play or learn to ride a bike. Other streets, such as Rapid Transit Boulevards or Main Streets, are bustling with activity, lined with shops and businesses, draw tourists, and offer a broad range of amenities. Still other streets, such as Urban or Rural Thoroughfares, connect different parts of the City and give priority to the mobility function. While each street is unique, many streets share common features, and a street typology is a useful way of thinking about streets with similar mobility and place functions.



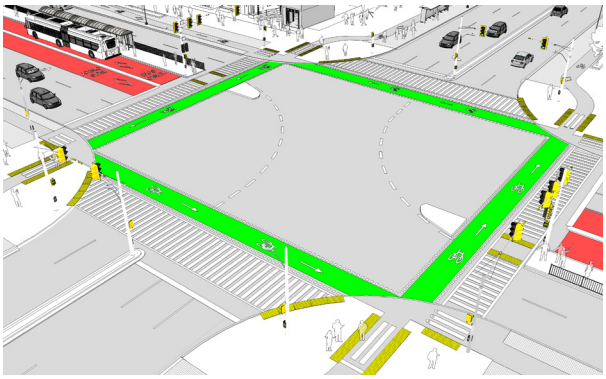
Rendering of Urban Thoroughfare complete street midblock segment

Chapter 4 provides guidance for each specific street type, as defined in the London Plan. In each section of this chapter, typical configurations, design treatments and amenities are illustrated with a three-dimensional rendering, such as the Urban Thoroughfare above. This chapter incorporates the general guidance from Chapter 2 and indicates how it may be applied for a specific street type. This rendering acts as a starting point for complete street conceptualization and design, showing how the space in the right-of-way should be allocated and how individual street elements are integrated to form a complete street. These diagrams include both the above ground features of a street that Londoners are readily familiar with, and subsurface utilities which, while less visible, are an important consideration in the design of a complete street. The accompanying text provides design parameters and considerations for pedestrians, cyclists, transit, motorists and freight, green infrastructure and utilities. Context is provided on why specific design elements were selected and when it may be appropriate to consider an alternate configuration. Practitioners will find this to be a useful starting point in the early stages of a street design when typical cross sections are being developed.

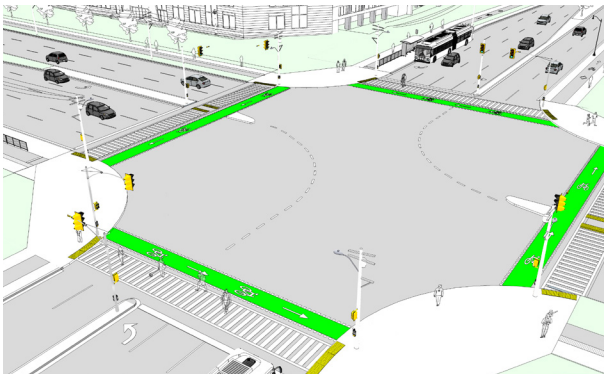
COMPLETE INTERSECTIONS

Intersections connect streets and allow users to navigate through the street network. They can serve as hubs, gateways, and transfer points and allow adjacent land uses to benefit from the connectivity to multiple corridors. Due to the overlapping paths of the various movements and modes, intersections also have greater potential for conflict than mid-block locations. With eight different street types in London, and many more contextual factors that affect intersection design, each individual intersection is unique.

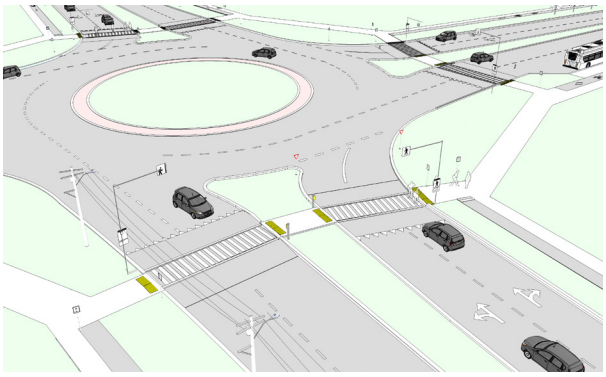
Chapter 5 provides guidance on the design of intersections. The first part of this chapter outlines several principles for improving safety and overall operation of intersections. Since there are many possible combinations of street types at intersections, five representative examples are illustrated in the subsequent sections of the chapter. The examples address different forms of intersection control including roundabouts, signalized intersections, and stop controlled intersections. Practitioners will find the principles and examples in this chapter to be a helpful resource when undertaking intersection design or assessing potential operational improvements for intersections.



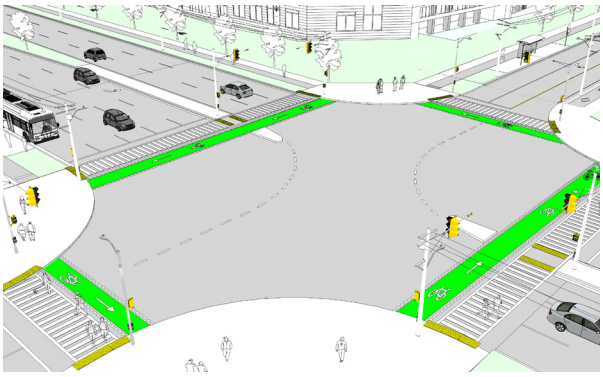
Rapid Transit Boulevard Intersecting a Main Street



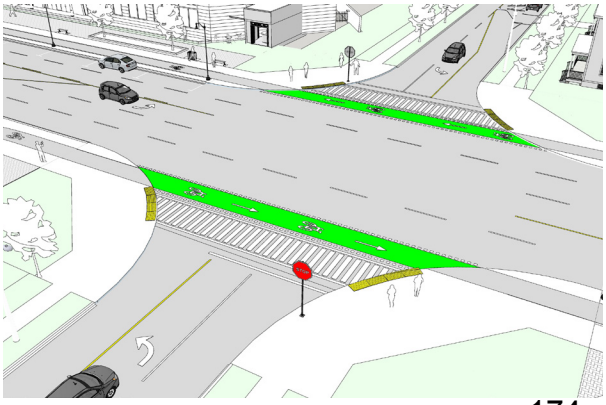
Urban Thoroughfare intersecting a Civic Boulevard (Signalized)



Urban Thoroughfare Intersecting a Civic Boulevard (Roundabout)



Urban Thoroughfare Intersecting a Neighbourhood Connector



Civic Boulevard intersecting a Neighbourhood Street

MONITORING

The complete streets process is informed by data and thorough review of existing and proposed conditions. Baselines can be established for existing streets to determine how they are performing and how they can be improved. The usage pattern of a street should be explored to inform existing, potential, and unmet demand. As the City moves forward with various completes streets projects, key lessons should be captured and integrated into future projects as appropriate. Metrics and monitoring activities are recommended along the key themes of mobility, connectivity, vitality, safety, accessibility, and sustainability. These monitoring activities include.

- Measuring performance through **multi-modal level of service (LOS)** analyses for intersections, street segments, and facility corridors;
- Measuring connectivity with **spatial analysis tools;**
- Measuring vitality by studying **public life** and tracking **retail sales;**
- Monitoring safety through **network screening** and **road safety assessments;**
- Reviewing accessibility and universal design elements of London's street network such as tracking **progress in implementing accessible curbs or transit stops; and**
- Tracking London's resilience and response to sustainability challenges through **emissions models**, tracking **non-auto modal share**, tracking **stormwater retention capacity and facilities**, and monitoring **tree canopy coverage**.

Chapter 6 in the CSDM focuses on monitoring. Practitioners should refer to this chapter during the preliminary planning phase of a project to determine appropriate baseline data collection strategies, and again after a project has been implemented to evaluate its performance.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON AUGUST 13, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**ADELAIDE STREET NORTH / CANADIAN PACIFIC RAILWAY GRADE SEPARATION ENVIRONMENTAL STUDY REPORT**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Adelaide Street North / Canadian Pacific Railway Grade Separation Municipal Class Environmental Assessment:

(a) Adelaide Street North / Canadian Pacific Railway Grade Separation Municipal Class Environmental Study Report **BE ACCEPTED**;

(b) A Notice of Completion for the project **BE FILED** with the Municipal Clerk; and,

(c) The Environmental Study Report **BE PLACED** on public record for a 30-day public review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Environment and Transportation Committee – November 28, 2005 – Priority Setting Factors for Future Rail / Road Grade Separations
- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Civic Works Committee – October 28, 2013 – Adelaide Street North / Canadian Pacific Railway Grade Separation Report
- Strategic Priorities and Policy Committee – June 23, 2014 – Approval of 2014 Development Charges By-Law and DC Background Study
- Civic Works Committee – January 5, 2016 – Environmental Assessment Appointment of Consulting Engineer
- Civic Works Committee – December 12, 2016 – Environmental Assessment Update
- Civic Works Committee – September 26, 2017 – Transport Canada Grade Crossing Regulations and Railway Funding Application
- Civic Works Committee – May 28, 2018 – Railway Rationalization

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by implementing and enhancing safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists. The environmental assessment identifies solutions to improve the Adelaide Street North

corridor by providing a new road-rail grade separation on Adelaide Street North at the Canadian Pacific Railway (CPR) tracks and will increase roadway safety by removing the potential for conflict between pedestrians, cyclists, drivers and CPR operations, improve traffic flow / operations by managing congestion and provide route reliability for emergency services and local transit. The grade separation provides an opportunity to improve active transportation choices / facilities and linkages. The implementation of the grade separation will also support the Rapid Transit initiative by providing vital parallel roadway network improvements to facilitate the implementation of the Bus Rapid Transit (BRT) north corridor.

BACKGROUND

Purpose

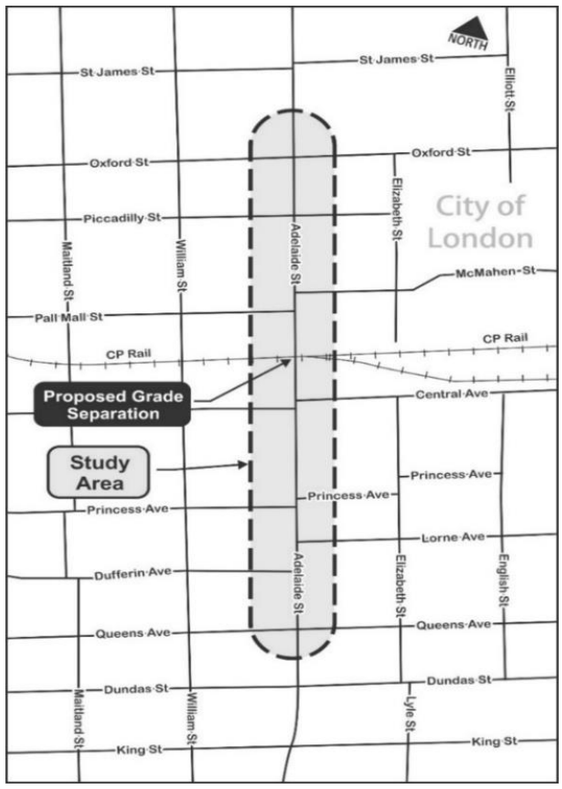
This report provides Committee and Council with an overview of the Municipal Class Environmental Assessment (EA) for the Adelaide Street North / Canadian Pacific Railway (CPR) Grade Separation and seeks approval to finalize the study. The completed Environmental Study Report (ESR) documents the EA and decision-making process for the proposed Adelaide Street North Improvements.

Context

The purpose of this EA is to satisfy the requirements of the Environmental Assessment Act by providing a comprehensive, environmentally sound planning process with public participation and to facilitate dialogue with parties representing a number of diverse interests.

This EA is required to facilitate improvements to the transportation system, create a safe crossing of the CPR tracks, coordinate the improvement with the Bus Rapid Transit initiative, and prepare the project with respect to future infrastructure funding programs. The need and justification for the study was identified as part of the City of London 2014 Development Charges Background Study.

The CPR crossing is located on Adelaide Street North between McMahen Street / Pall Mall Street and Central Avenue. The broader EA study area extends from Oxford Street East (in the north) to Queens Avenue (in the south). The study area is bounded by the heritage conservation districts of Old East Village and Woodfield. McMahen Park, with its heritage stone gates, is an important cultural / community feature within the study area. See below for a map illustrating the project limits.



Adelaide Street North – CPR Grade Separation Class EA Study Area

The CPR crossing of Adelaide Street North has previously been identified as the City's highest priority candidate for a new rail-road grade separation. The crossing, located on Mile 113.73 of CPR's Galt Subdivision, comprises two tracks across Adelaide Street North, which reduces to a single-track west of Adelaide Street North. The Galt Subdivision is a critical route for CPR's service to Canada and US customers, including local customers in the London area. CPR's rail yard operates to the east of Adelaide Street North and functions as a primary train assembly point (including shunting operations) and crew hub.

The Adelaide Street North / CPR Grade Separation project was identified in the 2014 Transportation Development Charges Background Study with a recommendation for construction in 2031. Due to the area's strategic location, the Smart Moves 2030 Transportation Master Plan (TMP) also identifies the need for traffic capacity optimization and transit priority on this corridor. The project timing was subsequently adjusted in the 2018 capital budget update for near-term implementation. The amendment considered the fastest possible project implementation with construction beginning as early as 2021, subject to EA clearance, property acquisition and railway concurrence.

The 2005 prioritization study that evaluated at-grade crossings in London indicated that the Adelaide / CPR crossing met the Transport Canada Rail Exposure Index Warrant for a grade separation. More recently, in 2013, the City completed a monitoring program of this crossing, observing 25 to 43 daily road blockages. The results of the 2013 monitoring program indicated a greater grade separation warrant at this location than previously considered in 2005 due to the additional road blockages created by railway shunting. Blockages of this magnitude result in total road crossing delays of 106 to 126 minutes per day. It was also observed that there was an average of 8 blockages per day that extended for more than 5 minutes. Further railway monitoring studies completed in 2017 and 2018, have confirmed that train switching activities at Adelaide Street North are significant and account for more than half of the blockages at this crossing, with

approximately 5 crossing blockages at Adelaide Street North for every 2 blockages at Richmond Street. Road blockages at this crossing result in the queuing of southbound traffic that extends northerly past Oxford Street and southerly past King Street. Additionally, approximately 40% of the crossings extend longer than 5 minutes.

The significant time and volume of blockages at the crossing create cut-through traffic onto local streets as drivers attempt to find alternate routes to their destinations. Road blockages also create a response time concern for emergency services. There are no grade separated crossings of the CPR track in the downtown area between Talbot Street and Quebec Street and long trains can block this entire distance. The safety concerns associated with pedestrians crossing multiple tracks, and the opportunity to create an uninterrupted north-south corridor for emergency vehicles makes this at-grade crossing location the City's highest priority for a new grade separation.

The London Plan

Adelaide Street North is a major four-lane arterial road which accommodates an average of 25,500 vehicles per day through the study area. The London Plan identifies it as a Civic Boulevard. Civic Boulevards are intended to move medium to high volumes of vehicular traffic, with a priority on pedestrian, cycle and transit movements; while also maintaining a very high-quality pedestrian realm and very high standard of urban design.

City of London 2030 Transportation Master Plan (2013)

One of the five key initiatives of the TMP is a *More Strategic Program of Road Network Improvements*. There is a greater emphasis in this TMP on transit, active transportation, Travel Demand Management (TDM), parking, and many road improvements will be required. The City's approach to defining the need for road network improvements has become more strategic. This approach is consistent with the City's expectation that transit and active transportation modal shares will increase significantly from current levels. The City's approach also explicitly recognizes that road improvements will be required for different purposes.

In this regard, a number of projects are required to complement the Bus Rapid Transit (BRT) initiative. Among the TMP road projects identified is Adelaide Street North – CPR Grade Separation.

London's Bus Rapid Transit Initiative

The Bus Rapid Transit (BRT) is a key initiative of the TMP in supporting the long term-term strategy for addressing and shaping the city's population and economic growth, transportation demands and mobility needs. The BRT network in combination with strategic program of road network improvements, will support the City's overall transportation network to reduce traffic congestion and make transit a convenient, comfortable and reliable travel option for residents. Adelaide Street is strategically positioned as a north-south route that offers a transportation alternative for vehicular traffic and an opportunity to create a more efficient London Transit network to connect with and support BRT via the stops planned at the intersection of King Street and Adelaide Street North.

London ON Bikes Cycling Master Plan (2016)

Given the currently constrained right-of-way (ROW) on Adelaide Street north and south of the project limits, designated cycling facilities are not proposed in the Cycling Master Plan. However, with the proposed underpass bridge at CPR providing the cross section

to accommodate cyclist is considered prudent planning given the long-term investment that the project represents. In addition, considering the nearby McMahan Park and Carling Heights Optimist Community Center to the east of Adelaide, it is expected that the grade separation would be attractive to cyclists as a connection across the railway.

The project team has completed Phase 4 of the Municipal Class Environment Assessment (MCEA) process. Phase 4 of the MCEA process involves the documentation of the environmental assessment process in an Environmental Study Report that includes the study recommendations and preliminary design concept.

DISCUSSION

Project Description

The Adelaide Street North / CPR Grade Separation Class EA study satisfies the requirements of the Municipal Class EA as a Schedule C project. Schedule C includes the construction of new facilities and major expansions to existing facilities. An Environmental Study Report (ESR) is required to document all aspects of the process to determine the recommended design and the environmentally significant aspects of the planning, design and construction of the proposed improvements. The ESR also identifies environmental effects and proposed mitigation measures, commitments to further work, consultation, and monitoring associated with the implementation of the project. A copy of the executive summary for the ESR is contained in Appendix A.

Planning Alternatives

Phase 1 of the Municipal Class EA process involved the problem and opportunity statement identification. It was determined that improvements are needed to address the frequent road blockages caused by CPR operations resulting in an unreliable transportation network and safety concerns for all road users (vehicles, transit, emergency services, pedestrians and cyclists). Frequent and long delays lead to driver frustration and increased cut-through traffic on local streets. There is an opportunity to improve safety and mobility for all road users.

Phase 2 of the Municipal Class EA involved identifying alternative planning solutions. The following alternatives were assessed against their ability to reasonably address the problems and opportunities, and in consideration of the constraints identified in the early stages of the study: Do Nothing; Intersection Improvements; Transportation Demand Management; Traffic Capacity Improvements; and Grade Separation. Based on public feedback received at public information centre (PIC) 1, the project team expanded the range of potential planning solutions to include: Change in CPR Rail Operations; and Partial Grade Separation.

With respect to the potential to ‘change CPR operations’, Municipal Council, at its meeting held on May 16, 2017, directed staff to work with appropriate parties, including the Canadian Transportation Agency (CTA) to request they facilitate discussion between CPR and CNR in order to negotiate an agreement for CP operations to relocate and merge onto the CN operational tracks within the City of London limits. In response to Council’s direction, Civic Administration has held a number of meetings with the railway companies and authorities. The report summarizing CPR and CNR positions on the concept of a rail rationalization can be found at: https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=46514

The corresponding Council resolution approved a strategy of strategic grade separations such as the Adelaide Street North / CPR Grade Separation combined with

the implementation of technologies or infrastructure aimed at improving the safety of the rail/urban interface as the long-term approach to mitigating the impact of rail activity in the City of London.

Locally at the CPR / Adelaide Street crossing, adjustments to CPR's operations to reduce the number of blockages at the crossing is not feasible given the yard's central location for CPR operations and the close proximity of integrated and complex rail yard infrastructure to Adelaide Street.

Recommended Planning Solution

The evaluation process concluded that the preferred planning solution includes intersection improvements and grade separation, as they both directly address the primary problems and opportunities in the long term. This solution will separate rail traffic from vehicles, transit, cyclists and pedestrians, improving safety of all users and increasing the reliability of the transportation network. This should result in a reduction in cut-through traffic onto local streets. This solution provides an opportunity to improve the streetscape, creating a safe and welcoming space for pedestrians and contribute to the surrounding neighbourhood.

Design Alternatives

Phase 3 of the Municipal Class EA process involved the generation and evaluation of design alternatives for the following aspects of the overall design: grade separation type (underpass or overpass); road alignment; road cross-section; local street connections (Central Avenue, Pall Mall Street, McMahen Street); and streetscape design.

Numerous factors influenced the generation, assessment, and evaluation of the design alternatives, for example:

- Community mobility, connectivity, character and direct community feedback / input;
- Impacts to properties, impact to McMahen Park;
- Cultural Heritage resources, adjacent Heritage Conservation Districts, McMahen Park heritage gates;
- Active transportation;
- Opportunities for streetscape design / urban design; and
- Technical factors (transportation network, road design, stormwater / groundwater management, constructability, cost and CPR operations).

Recommended Design

Based on the evaluation of design alternatives, the recommended design consists of the following key aspects:

- Underpass Grade Separation: The underpass, or subway, is preferred because there are fewer property impacts, relatively little visual intrusion to surrounding community and decreased traffic noise from street. The underpass maintains the intersections of local streets, is more attractive to pedestrians and cyclists and is preferred by the community when compared to the overpass design alternative.
- 'Central' Alignment of Adelaide Street North: A detailed consideration of the Adelaide Street alignment indicates that the central alternative that closely follows the current alignment, as compared to a shift to the west, minimizes overall property impacts and maintains a straighter road. The central alignment maintains the local street fabric and connections and minimizes impacts to CPR infrastructure.

- Service and utility corridor on east side of Adelaide Street North: The underpass creates the need for a utility corridor outside the excavation. The east alignment minimizes permanent property impacts and integrates well with the proposed temporary road detour.
- Central Avenue Realignment: The opportunity to better align Central Avenue across Adelaide Street will improve safety for all users and provide better transportation, active transportation and community connectivity. The recommendations include proposed cycling lanes on Central Avenue.
- Pall Mall Street Intersection: Pall Mall traffic will maintain connectivity with southbound Adelaide Street North with a restriction on left-turn movements for safety and available sightlines, given proximity to underpass profile. The surrounding grid network of streets provides alternatives.
- McMahen Street: Consideration was given to aligning Pall Mall Street and McMahen Street similar to what is possible at Central Avenue. However, the associated property impacts are significant and it is recommended to maintain the existing intersection configuration. The signalized pedestrian crossing will be shifted from Pall Mall Street to McMahen Street to align with the new primary entrance to McMahen Park that is shifted slightly north. Traffic signals are not being recommended at this time due to additional property impacts and concerns of attracting more cut-through traffic from Oxford Street through the residential neighbourhood.
- Stormwater and groundwater management will be achieved via a new pumping station and storage infrastructure to be located in the northwest quadrant of Adelaide Street North and Central Avenue.
- Temporary road detour on east side of Adelaide Street North: Solutions to mitigate social impacts associated with construction projects are investigated for transportation projects. A temporary detour is possible on this project that will maintain north-south traffic including emergency services during construction with the exception of short-term road closures. The east-side detour avoids permanent property impacts beyond those required for the permanent grade separation and utilizes the same footprint as the new service / utility corridor. The details of the road detour are subject to further review with CPR during the detailed design phase with consideration of encroachment into the yard and viability of rail yard infrastructure. A four-lane detour was assessed for the purpose of the EA assessment, however further review with CPR have identified significant challenges to railway operational safety and impacts to rail yard infrastructure and costs, that may deem a four-lane rail crossing not feasible. Implementation of a two-lane detour with turn lanes at the intersections could provide a level of service that is marginally reduced but acceptable given the temporary nature of the detour.

The project team's understanding of the design constraints has evolved through the study. Following PIC 2, the project team explored opportunities with CPR to coordinate with the CPR yard infrastructure. This allowed both the new service / utility corridor and temporary road detour to be located on the east side of Adelaide Street North, thereby significantly reducing property impacts.

The recommended design achieves grade separation and provides excellent opportunity for the design of a vibrant streetscape and safe active transportation facilities.

Cycling Facilities

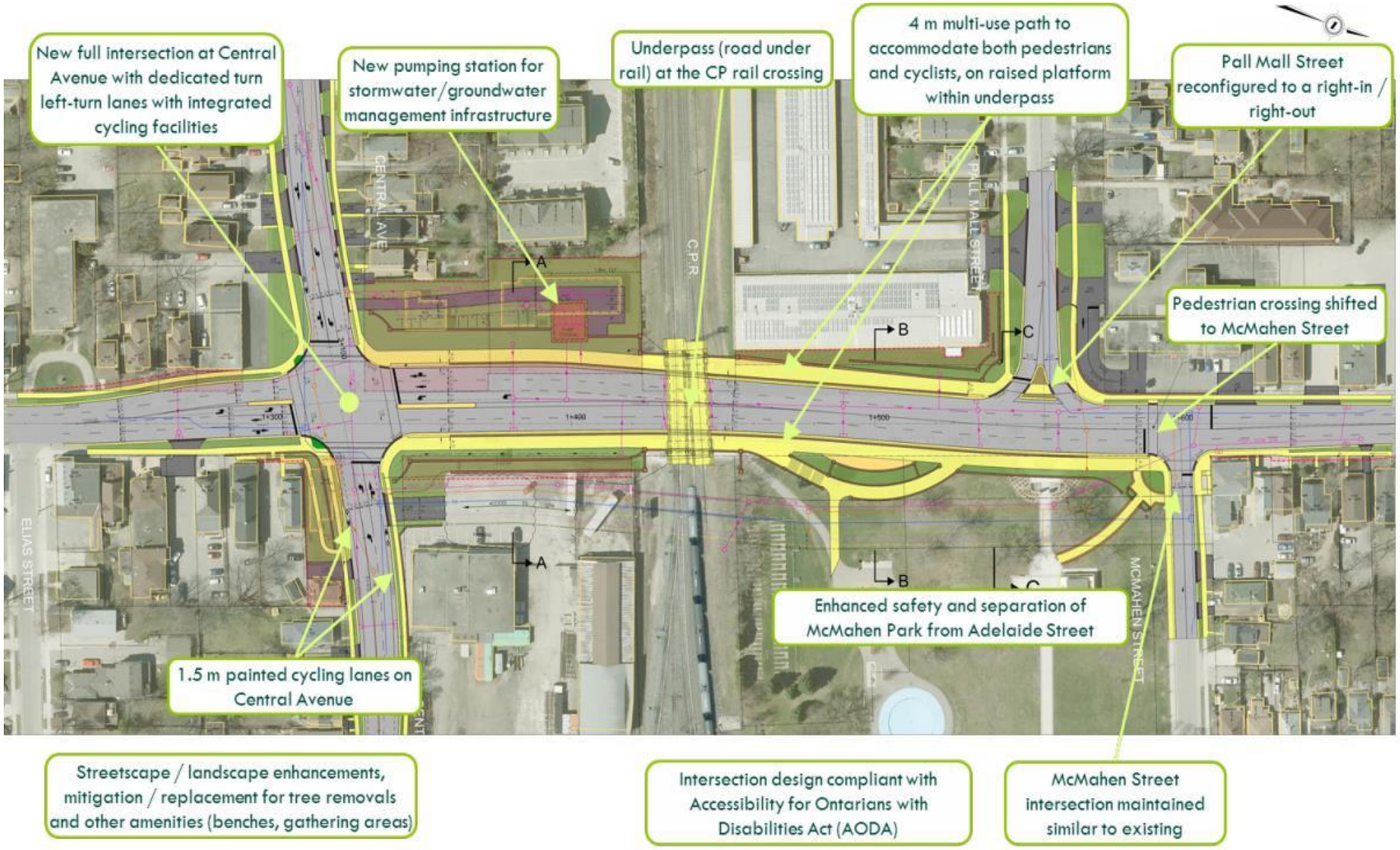
In response to public feedback received at PIC 3 and further examination of the cycling facilities for Adelaide, the cycling facility design was further scrutinized with the development of two options as follows:

- Option 1 (recommended) is to widen the raised platform to provide a 4 m wide multi-use pathway (MUP) in place of a sidewalk. This MUP would be used by cyclists and pedestrians on both sides of the road corridor.
- Option 2 is to provide 3 m pedestrian sidewalks on a raised platform and 3 m shoulder with curb-separated bike lanes at street level.

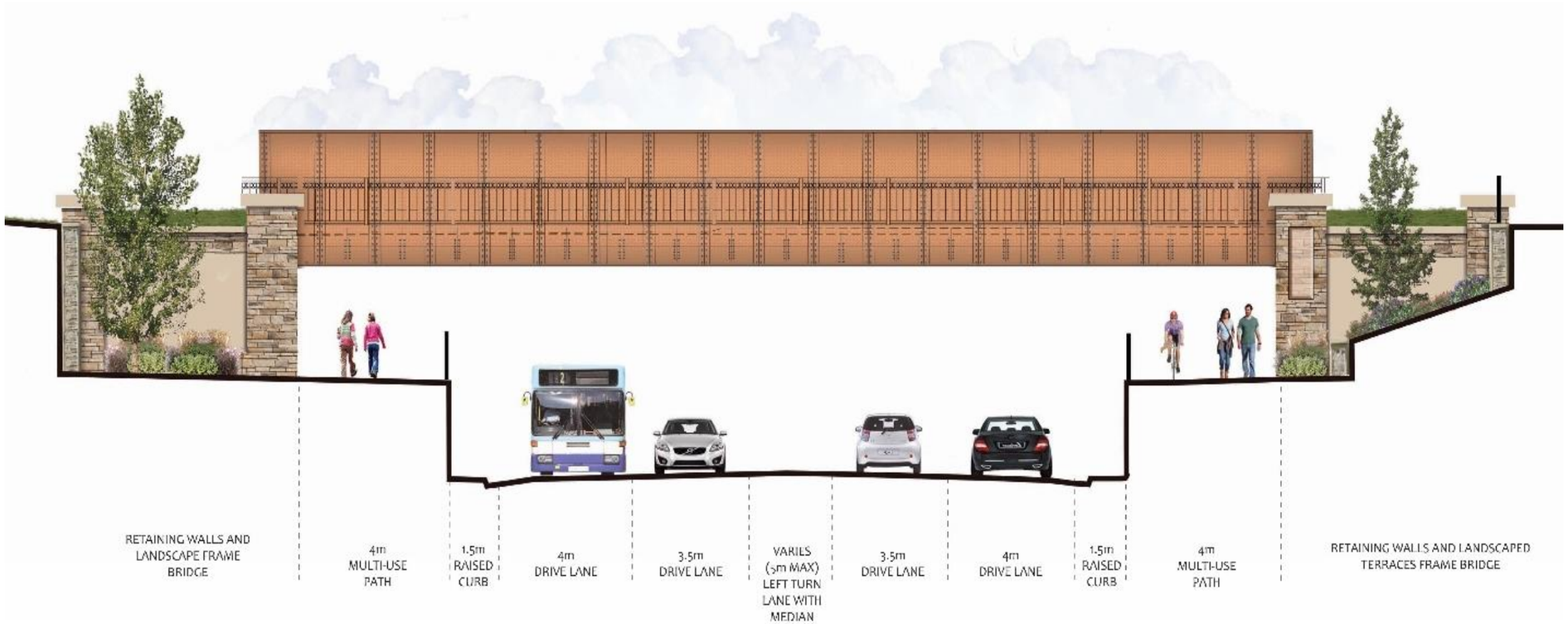
Given that Adelaide Street North is not proposed to have on-street designated / separated cycling facilities downstream and upstream of the grade separation due to corridor constraints, the project team concluded that a cycling connection through the grade separation should cater to short connectivity trips across the rail corridor. Cyclists using the underpass (whether coming from Adelaide, Central or Pall Mall Street / McMahan Street) will prefer to avoid the proposed 6% street grades by using the MUP which would be elevated above street level and therefore will require less effort to pass through. Option 1 is viewed as more comfortable for a broader range of users (e.g. all ages and abilities) because of the greater separation from motor vehicles. Option 1 also requires less maintenance effort and cost. Left turn queue boxes and cross rides will be implemented as appropriate.

It is proposed to provide on road cycling lanes on Central Avenue across the intersection with Adelaide Street North with connections to the MUP on Adelaide Street North and the cycling lanes on Central Avenue. This represents an enhancement beyond the signed bike route recommended for Central Avenue in the Cycling Master Plan and is warranted given the improved connectivity across Adelaide Street.

Pall Mall Street and McMahen Street are signed bike routes per the Cycling Master Plan. The streets will connect to the MUP on Adelaide Street North. Appropriate signage to facilitate the connection at the McMahen Street signalized pedestrian crossing will be developed in detailed design.



Recommended Plan Overview



Adelaide Street North Road Cross-Section through Underpass

Streetscape Design

The streetscape concept was prepared based on the following principles:

- integrate the grade separation visually into the surrounding neighbourhood;
- minimize impacts to buildings, property and businesses;
- create a pedestrian-friendly streetscape; establish and maintain pedestrian and cycling connections between destinations across and along Adelaide Street North;
- frame and enhance the new bridge through aesthetic treatments that provide a visual amenity to the community;
- create opportunities for neighbourhood identity features and reference heritage architectural styles and patterns; and,
- identify opportunities for new and enhanced public spaces.

Community input was vital to the development of the streetscape concept plan. Input received throughout the study and directly from the community associations and Old East Village BIA was important to the process of confirming design objectives, priorities and preferences and developing the concept design. The streetscape design was very well-received by the community at PIC 3. The streetscape rendering is provided on the following page.

View looking northbound at Adelaide Street North and Central Avenue

Public and Agency Consultation

A Notice of Study Commencement for the project was issued in February 23, 2016 to stakeholders, First Nations, property owners, and community associations. A project page on the City's website was also launched at that time. Public feedback at the commencement of the study primarily related to CPR operations, the need for a grade separation, cut-through traffic on residential streets, potential property and access impacts, neighborhood connectivity, pedestrian and cyclist safety and potential for higher traffic volumes and noise.

As the owner of the railway, CPR is an important project partner and will ultimately have approval of any proposed changes to their infrastructure. City staff have had ongoing communication with CPR throughout the study.

There are four community and business associations with interest in the study area: Piccadilly Area Neighbourhood Association (PANA), Woodfield Community Association, Old East Village Business Improvement Area (BIA) and Old East Village Community Association. Representatives from each these groups engaged City staff early in the study and have remained directly involved in the study process throughout. An initial meeting was convened with community representatives on May 24, 2016. A follow-up walking tour of the neighbourhood was held on October 6, 2016. A further meeting was convened on April 11, 2018 to review the proposed design, including the streetscape/ urban design concept in advance of Public Information Centre 3. The partnership with the community groups and business associations has been important to the success of this EA, and the community associations have played a key role in raising the project profile and encouraging the broader community to participate in the study.

The first public information centre (PIC) was held on June 16, 2016 and provided stakeholders with an opportunity to meet the project team, review the study scope, existing conditions, need and justification and planning alternatives. Approximately 140 people attended. Feedback themes heard at the PIC included:

- Confirmation that a grade separation is needed to alleviate traffic with a strong preference for an underpass;
- A desire for better pedestrian facilities on Adelaide Street North;
- Concern that an overpass will break up the neighbourhoods;
- Concern with cut-through traffic in the neighbourhoods on the side streets when trains block Adelaide Street North; and,
- A suggestion to change CPR operations instead of constructing the grade separation.

A comment sheet / questionnaire was provided at PIC 1 and posted on the City's website until August 31, 2016. A total of 125 comment sheets were received in this period. From the comment sheet / questionnaire, the highest rated issues were:

- travel delays due to frequent train crossing road blockages;
- the need for safe and comfortable sidewalks and cycling facilities; and
- improved air quality and noise.

The most important goals for the study, from the questionnaire, were to:

- protect and improve pedestrian accessibility/walkability;
- develop a solution that contributes to a vibrant street and neighbourhood;
- ensure continued access to homes and businesses; and,
- protect the heritage value of the neighbourhood.

Based on feedback received from the community associations and from the general public at PIC 1, the project team's approach to public engagement was expanded to include one additional PIC with a workshop format. This approach allowed the project team to better address the complex technical components of the study, respond to the high level of community interest and desire for direct involvement, and provide more opportunity for public input to the streetscape design to enhance the neighbourhood.

Public Information Centre 2 was held on December 14, 2016. The PIC consisted of a drop-in open house from 4:30 pm to 8:00 pm with a workshop component from 6:00 pm to 7:30 pm. The purpose of the PIC was to confirm the preferred planning solutions, describe the multi-step design process and present alternative design concepts (including grade separation type and side street connections), and actively develop a high-quality streetscape design through the workshop. The workshop provided a more visual project interaction to gain feedback on specific elements such as sidewalk configuration, side treatments, pedestrian space, aesthetic and theming opportunities, and landscape design. Those not able to attend the workshop had an opportunity to provide input on these elements through the Get Involved London website. Approximately 60 people attended the PIC and almost all attendees participated in the workshop.

A comment sheet / questionnaire was provided at PIC 2 and posted on the City's website until January 31, 2017. A total of 26 written comments were received in this period. Common verbal and written feedback included:

- A strong preference for the underpass design;
- An understanding of the need for a grade separation but concern that it will separate the neighbourhoods;
- Concern about potential for increased noise associated with the grade separation and potentially higher traffic volumes on Adelaide Street North;
- Suggestion for a signalized intersection at McMahen Street;
- A desire for a friendly, safe, and secure space for pedestrians;
- A preference for dedicated bicycle lanes;
- Concern regarding property impacts;
- Concern for disruption to local businesses during construction; and,
- A desire to maintain the connection of Pall Mall Street and Adelaide Street North.

Public Information Centre 3 was held on April 26, 2018. The purpose of this PIC was to present the Recommended Plan including streetscape design concept, present the preliminary construction staging concept and overall implementation timeframes. Approximately 100 people attended. A total of 57 written comments were received in this period. Common verbal and written feedback included:

- Strong support for the underpass design;
- Very positive feedback for the streetscape design;
- Positive feedback on the design of the Central Avenue intersection;
- Community 'feels they have been heard' and the design is reflective of feedback;
- Questions regarding the timing of the design and construction;
- Some concern about temporary loss of use of some areas of McMahen Park during construction, and support for park revitalization post-construction; and,
- Some concern about potential for traffic infiltration to neighbourhoods and interest in providing traffic calming during construction.

In addition to these formal events, the project team met individually numerous times with property owners who are most significantly impacted. Several proactive meetings occurred prior to Public Information Centre 2 and Public Information Centre 3 to provide early notification to those impacted. Subsequent ongoing dialogue has occurred with interested parties throughout the study.

Property Requirements

Significant efforts have been made during the Adelaide Street North / CPR Grade Separation Class EA to minimize property impacts, including:

- Maintaining a central alignment of Adelaide Street North;
- Providing the traffic detour and utility corridor along the east side of Adelaide Street North;
- Providing a 'best-fit' design for the realigned Central Avenue intersection; and
- Maintaining the existing connections to Adelaide Street North from Pall Mall Street and McMahen Street, it being noted that access to Pall Mall Street will be restricted to a right-in and right-out arrangement.

Despite these measures, some sections of the Preferred Plan have a substantial change in the road profile and therefore impacts to properties are unavoidable. Based on the preliminary design concept, four properties have been identified as likely to be fully impacted due to road grade changes and closure of access to Adelaide Street North. None of these properties are included on the City of London Inventory of Heritage Resources as listed or designated.

Thirteen properties are likely to have minor impacts to frontage with three of them likely requiring some minor building modifications to maintain access. One property, 596 Adelaide Street North – The Cat Hospital, is included on the City of London Inventory of Heritage Resources as a listed heritage property, Priority 1. The building will not be affected and anticipated impacts are limited to the frontage of the property with changes to the existing access and landscaped garden.

IMPLEMENTATION

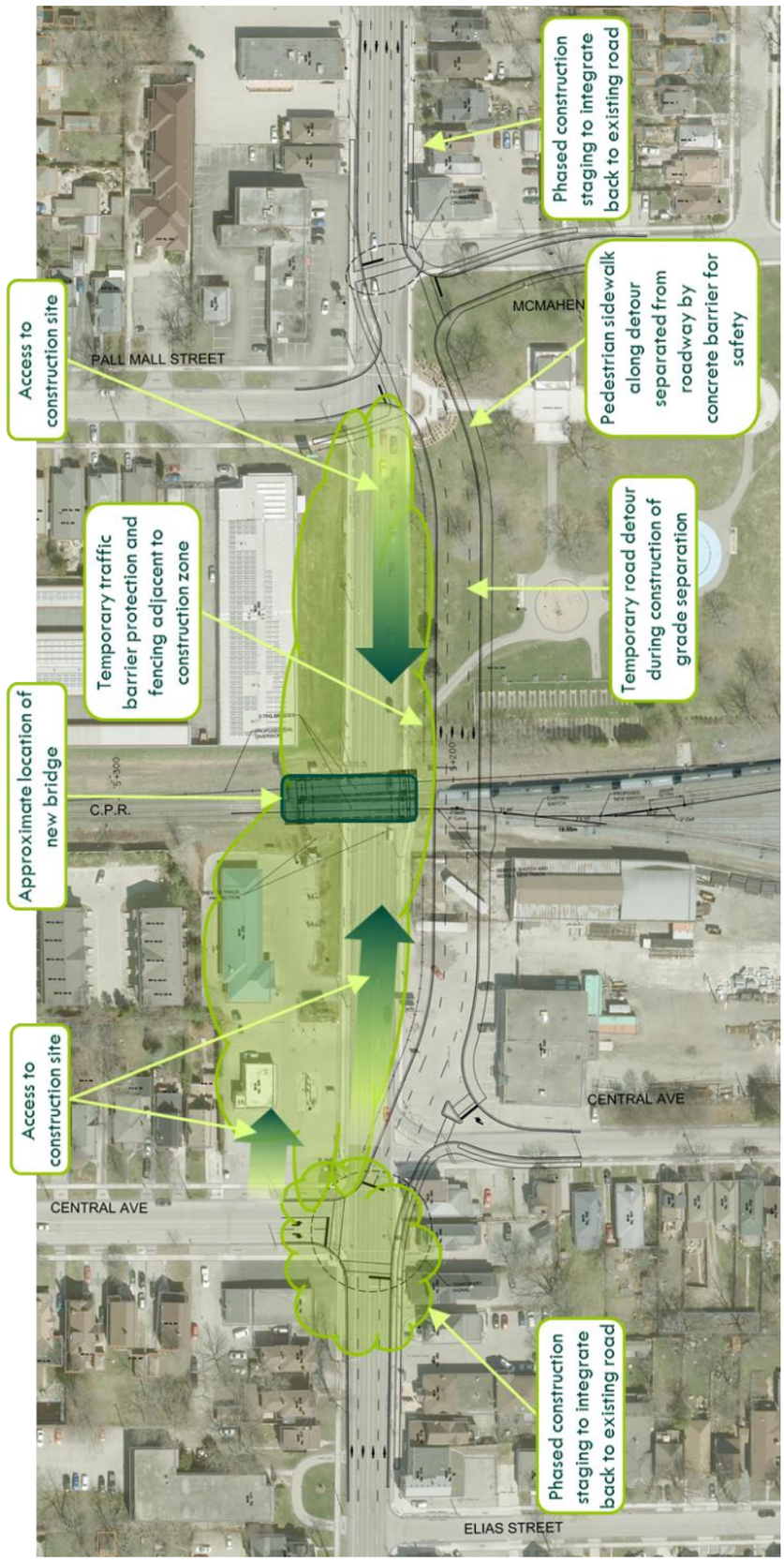
The project is planned for implementation as expeditiously as possible. Construction timing is subject to the completion of the environmental assessment process, design, property acquisition and CPR concurrence. Implementation is expected within the 5 year timeframe.

Due to the complexity of the project, the construction duration is expected to be approximately 2 years. The majority of the underpass construction can be completed 'off-line' with traffic routed around the construction area via the temporary road detour. Construction timing, duration, staging and traffic management will be fully developed during the detailed design phase. It is anticipated that some construction activities will require short-term periodic lane closures or temporary lane reductions, for example:

- Relocation and installation of utilities and municipal services will involve short-term closures or lane reductions to through-traffic. A number of closures will be required at intersections to complete utility crossings.
- Modifications to rail infrastructure will involve short-term closures to Adelaide Street North (possibly restricted to weekend closures).
- Longer closure / lane reduction to through-traffic will occur with the lowering of Adelaide Street North to match the underpass road profile. Ideally this work will be planned during a single 4 to 6 week closure period on Adelaide Street North.

Local street traffic and walk-in access to businesses can likely continue via local streets during this period.

- Once Adelaide Street North is lowered, it will be reopened to traffic. Local streets will then be lowered to match the new grade.



Construction Staging Concept (Preliminary)

FINANCIAL CONSIDERATIONS

A preliminary construction cost for the Adelaide Street North / CPR grade separation is approximately $58.3 M. The cost estimate includes roadway construction, the railway grade separation bridge structure, CPR costs (i.e., yard modifications, flagging, etc.), municipal services and utility relocation, temporary road detour, traffic and pedestrian signals, pump station with storage facility, landscaping, staging, and property acquisition. The preliminary estimate for the project is summarized below which includes appropriate contingencies. Cost sharing is anticipated with Canadian Pacific Railway at 15% of the total project cost. The cost estimate aligns with the approved 2017 capital budget amendment case.

Item	Estimated Cost ($)
Removals	1,139,000
Roadwork	10,826,000
Storm Sewers / Pump Station	8,779,000
CPR Structure	9,832,000
Sanitary Sewer	567,000
Watermain	876,000
Temporary Work	660,000
Road Detour	2,027,000
Utility Relocation	4,440,000
Rail Works and Flagging	4,080,000
Property Acquisition	9,800,000
Engineering	5,250,000
TOTAL	58,276,000

CONCLUSION

Implementation of the City's highest priority grade separation at Adelaide Street North and CPR helps fulfill the Strategic Plan Area of Focus of Building a Sustainable City by implementing and enhancing safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists and implements the approved strategy to mitigating the impact of rail activity in the City of London.

The EA was prepared with input from community associations (Old East Village, Woodfield and Piccadilly Community Associations and the Old East Village BIA), property and business owners, external agencies, utilities, emergency service providers, and other stakeholders. Indigenous communities with potential interest in the study area have been contacted regularly throughout the project; to date no concerns or interests have been raised.

The project has met the requirements of the Ontario Environmental Assessment Act through the completion of the Municipal Class Environmental Assessment study. An Environmental Study Report has been prepared and will be made available for public review, pending approval from Civic Works Committee and Council.

The EA recommends that an underpass (road under rail) be provided on Adelaide Street North. The grade separation will improve roadway safety, manage congestion and provide route reliability for emergency services and local transit. The grade

separation also provides an opportunity to improve active transportation choices, facilities and linkages. The implementation of the grade separation will also support the Rapid Transit initiative by providing vital parallel roadway network improvements to facilitate the rapid transit implementation.

Pending Council approval, a Notice of Completion will be filed, and the ESR will be placed on public record for a 30-day review period.

Stakeholders and the public are encouraged to provide input and comments regarding the study during this period. Should the public and stakeholders feel that the EA process has not been adequately addressed, they may request a Part II Order to the Minister of the Environment within the 30-day review period per MOECC instructions on their website. If no requests for a Part II Order are received, the project will be in an immediate position to move forward to the property acquisition and construction stages in accordance with the recommendations of the study.

Construction is anticipated to begin as early as 2021 subject to Council approval of the capital budget, property acquisition, approval schedules and railway concurrence.

Acknowledgements

This report was prepared with the assistance of Ardian Spahiu, P.Eng, Transportation Design Engineer and Josh Ackworth, C.E.T., Technologist II of the Transportation Planning & Design Division.

SUBMITTED BY:	**RECOMMENDED BY:**
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Attachment: Appendix A – Environmental Study Report Executive Summary

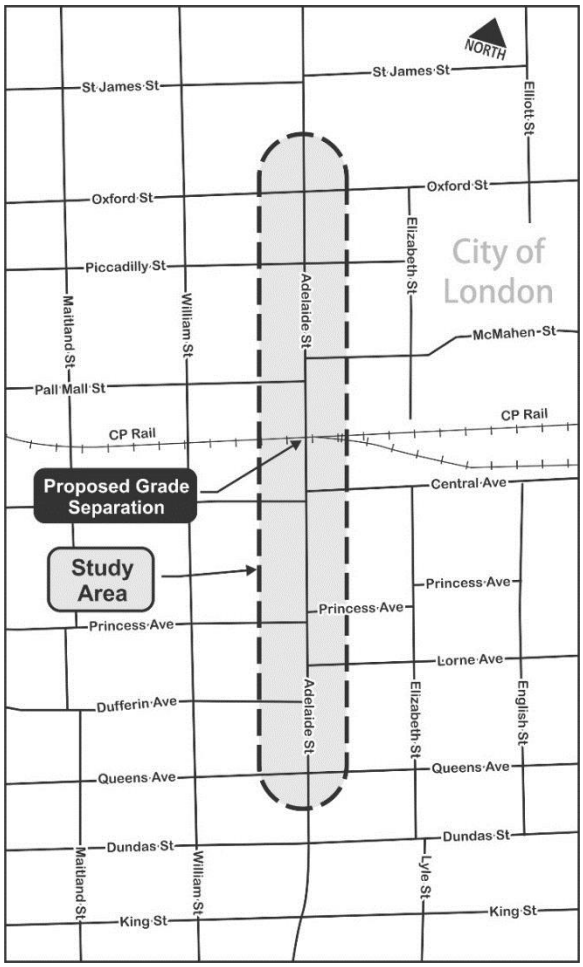
cc. Gillian Thompson – WSP Group
Jennifer Benedict – Canadian Pacific Railway

Executive Summary

ES1 Introduction

The City of London has completed a Class Environmental Assessment (Class EA) study for the Adelaide Street North - Canadian Pacific Railway Grade Separation. While the study has focused on the Canadian Pacific Railway Company (herein referred to as CP) rail line located just north of Central Avenue, broader needs and implications from Oxford Street, in the north, to Queens Avenue, in the south, were also considered.

Adelaide Street is a major four-lane arterial road which accommodates an average 26,000 vehicles per day through the study area. Within The London Plan, Adelaide Street North is classified as a Civic Boulevard, which places a priority on pedestrian, cycling and transit, moving 'medium to high volumes of vehicular traffic', and encourages a high-quality pedestrian realm / urban design.



The CP crossing of Adelaide Street North has been identified as the City's highest priority candidate for a new rail-road grade separation. The crossing, located on Mile 113.73 of CP's Galt Subdivision, comprises two tracks across Adelaide Street North, which reduces to a single-track west of Adelaide Street North. The Galt Subdivision is a critical route for CP's service to Canada and US customers, including local customers in the London area. CP's rail yard operates to the east of Adelaide Street North and functions as a primary train assembly point (including shunting operations) and crew hub.

The Adelaide Street North - CP Grade Separation project was identified in the City's 2014 Transportation Development Charges Background Study with a recommendation for construction in 2031. Due to the area's strategic location, the Smart Moves 2030

Transportation Master Plan (TMP) also identifies the need for traffic capacity optimization and transit priority on this corridor. The project timing was subsequently adjusted in the 2018 capital budget update for near-term implementation. The amendment considered the fastest possible project implementation with construction beginning as early as 2021, subject to EA clearance, property acquisition and railway concurrence.

The 2005 'Priority Setting Factors for Future Rail / Road Grade Separations' study (November 2005) that evaluated at-grade crossings in London indicated that the Adelaide Street North - CP crossing met the Transport Canada Rail Exposure Index Warrant for a grade separation. More recently, in 2013, the City completed a monitoring program of this crossing, observing 25 to 43 daily road blockages. The results of the 2013 monitoring program indicated a greater grade separation warrant at this location than previously considered in 2005 due to the additional road blockages created by railway shunting. Blockages of this magnitude result in total road crossing delays of 106 to 126 minutes per day. It was also observed that there was an average of 8 blockages per day that extended for more than 5 minutes.

Further railway monitoring studies completed in 2017, have confirmed that train switching activities at Adelaide Street North are significant and account for more than half of the blockages at this crossing, with approximately 5 crossing blockages at Adelaide Street North for every 2 blockages at Richmond Street. Road blockages at this crossing results in the queuing of southbound traffic that extends northerly past Oxford Street and southerly past King Street. Additionally, approximately 40% of the crossing blockages extend longer than 5 minutes.

The significant time and volume of blockages at the crossing results in cut-through traffic onto local streets as drivers attempt to find alternate routes to their destinations. Road blockages also create a response time concern for emergency services. There are no grade separated crossings of the CP track in the downtown area between Talbot Street and Quebec Street and long trains can block this entire distance. The safety concerns associated with pedestrians crossing multiple tracks, and the opportunity to create an uninterrupted north-south corridor for emergency vehicles makes this at-grade crossing location the City's highest priority for a new grade separation.

This Class EA study has satisfied the requirements of the Ontario Environmental Assessment Act by providing a comprehensive, environmentally sound planning process with public participation, and to facilitate dialogue with parties representing

many diverse interests. This Environmental Study Report (ESR) documents the decision-making process carried out during the Class EA study.

CP is an important project partner as the owner of the railway. CP has provided input to and general agreement with the preferred grade separation design. Further review with CP is required for the future detailed design phase.

ES2 Planning Context

The planning and policy context is discussed in Chapter 2 of the Environmental Study Report. Some of the key plans / policies include:

The London Plan - Adelaide Street North, within the study area, is identified as a Main Street place type, and has a Civic Boulevard street classification. The Main Street place type encourages a broad range of residential, retail service and office uses. Mixed-use building is encouraged. This place type reflects the existing use and supports redevelopment / reinvestment in this area. The Civic Boulevard Street Classification places a priority on pedestrian, cycling and transit, moving 'medium to high volumes of vehicular traffic', and encourages a high-quality pedestrian realm / urban design.

The current land use / zoning (under the current Official Plan) along Adelaide Street North is predominantly Main Street Commercial Corridor with pockets of Industrial and Low Density Residential. The Main Street Commercial Corridor is intended to: provide for the redevelopment of the vacant, under-utilized and poorly maintained properties; encourage development which maintains the scale, setback and character of the neighbourhood; encourage common parking areas instead of individual access points and parking areas; encourage mixed use development to achieve higher densities and reinforce the modal shift to transit and active transportation.

City of London 2030 Transportation Master Plan (2013) - One of the five key initiatives of the TMP is a More Strategic Program of Road Network Improvements. There is a greater emphasis in this TMP on transit, active transportation, and Travel Demand Management (TDM) many road improvements will be required. The City's approach to defining the need for road network improvements has become more strategic. Road widening projects in urban built-up areas have generally been avoided so as not to compete with, or undermine, priority transit corridors, except where required to fill in between adjacent segments or at key constraint areas. This approach is consistent with the City's expectation that transit and active transportation modal shares

will increase significantly from current levels. The City's approach also explicitly recognizes that road improvements will be required for different purposes.

In this regard, a number of projects are required to complement the Bus Rapid Transit (BRT) initiative. Among the TMP road projects identified is Adelaide Street North – CP Grade Separation. Due to the area's strategic location, the TMP identifies the need for traffic capacity optimization and transit priority on this corridor.

City of London Strategic Plan (2015-2019) - The project supports the Strategic Plan through the strategic focus areas of: building a sustainable city by providing robust infrastructure and improving safe mobility for pedestrians, cyclists, transit users and drivers; and strengthening our community by contributing to a healthy, safe and accessible City.

2014 Development Charge Background Study - The DC Background Study included an "Adelaide Street – CP Overpass" and identified high level funding allocations as well as recommended timing for implementation of 2031. Through the current Development Charges Study Update (2019), the funding allocation has been adjusted (increased) and implementation timeframes have been advanced. Through the Class EA study, the recommendation has been made for an underpass.

SHIFT: London's Rapid Transit Initiative - The Rapid Transit (RT) network will rely on strategic road improvements to support the City's overall transportation network. Adelaide Street North is strategically positioned as a north-south arterial route that offers a transportation alternative to Richmond Street for vehicular traffic and an opportunity to create a more efficient London Transit network to connect with and support RT via the stop planned at King Street.

Cycling Master Plan (2016) – The Class EA study considered the existing and proposed cycling network and has provided recommendations with respect to enhancing the network and facilities within the study area.

Rail Rationalization Study – Undertaken in response to Council's direction for City staff to work with appropriate parties, including the Canadian Transportation Agency (CTA) to request they facilitate discussion between CP and CN in order to negotiate an agreement for CP operations to relocate and merge onto the CN operational tracks within the City of London limits. In response to Council's direction, Civic Administration has held several meetings with the railway companies and authorities. The report summarizing CP and CN positions on the concept of a rail rationalization can be found at:

https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=46514

Based on the outcomes of the study, it is recommended that the City continue with planning strategic grade separations, including the Adelaide Street North - CP Grade Separation that is the subject of this Class EA study, combined with the implementation of technologies or infrastructure aimed at improving the safety of the rail/urban interface as the long-term approach to mitigating the impact of rail activity in the City of London.

ES3 Traffic Analysis

Within the study area, Adelaide Street North is an arterial roadway with a 4-lane cross-section (two lanes in each direction). The posted speed limit is 50 km/h within the study area. London Transit Route 16 and 92 provide service on Adelaide Street North.

The traffic analysis was undertaken for a broad study area that included the Oxford Street East intersection, in the north, and Queens Avenue intersection, in the south, and included fourteen intersections.

The full traffic analysis (**Appendix A** of this ESR) included intersection recommendations for consideration on Oxford Street and Queens Avenue.

Key findings of the transportation assessment (**Chapter 2**) relative to the grade separation are summarized below:

- Adelaide Street North carries approximately 26,000 vehicles per day in the north-south direction. The southbound traffic peaks during the morning peak hour, and the northbound traffic peaks during the afternoon peak hour.
- During the five-year period from 2011 to 2015, a total of 468 collisions were recorded on the study area corridor, including 349 collisions at intersections (75%) and 119 collisions on mid-blocks (25%).
    - Approximately 50% of the intersection collisions occurred at the Oxford Street East intersection. This intersection has experienced 173 collisions, including one fatal collision in the five-year period.
    - The Queens Avenue intersection experienced 72 collisions in the five-year period.
- Thirty-five mid-block collisions occurred between Oxford Street East and Piccadilly Street during the five-year period, resulting in the highest collision rate of 0.78 for mid-blocks. The mid-block between Pall Mall Street and Central

Avenue has experienced 30 collisions from 2011 to 2015. Potential contributing factors for mid-block collisions include: driver frustration due to delays at the CP rail crossing, substandard lane widths, absence of dedicated turning lanes and high density of accesses / drive-ways along the corridor.

- Road blockages on Adelaide Street North created by CP operations through the at-grade rail crossing, result in significant delays for all the road users and creates long queues and gridlock in the area. To address this issue, a grade separation is essential.
- In addition to the proposed grade separation, and based on the intersection operational analysis results, improvements were identified for the following intersections:
    - Pall Mall Street Intersection: converting existing intersection configuration into a right-in / right-out and relocating the signalized pedestrian crossing to McMahen Street (this relocation is required to address the geometric constraints with the proposed grade separation);
    - Central Avenue Intersection: realigning the east and west legs of Central Avenue to eliminate the existing jog and providing dedicated turning lane for all the left turn movements.

Preliminary recommendations were also identified for Oxford Street and Queens Avenue. These were reviewed carefully by the project team and, based on comprehensive consideration of potential property requirements, impacts to major utilities and potential impacts to other road users (e.g. pedestrians and cyclists), the intersection recommendations for Oxford Street and Queens Avenue have been set aside from further consideration in this Class EA study.

The complexity of the Oxford Street intersection at Adelaide Street and the potential scale of property impacts is deemed to warrant a separate and dedicated Class EA study. Similarly, potential intersection improvements that could be considered at Queens Avenue have been set aside in the current study and can be revisited in future.

ES4 Problem and Opportunity Statement

Phase 1 of the Municipal Class EA involved identifying study area problems and opportunities. Considering the transportation planning policy context, the analysis of existing and future traffic conditions and public input, the following problem and opportunity statement was developed:

Adelaide Street North is an important north-south arterial roadway and the centre of the local community, providing access to a variety of local destinations and supporting both city-wide and local mobility for many different users (pedestrians, cyclists, transit patrons, and drivers).

Previous studies (2005, 2013, 2017 / 2018) all confirm that Adelaide Street North meets the Transport Canada rail exposure index warrant for a grade separation.

The significant time and volume of blockages at the crossing results in cut-through traffic onto local streets as drivers attempt to find alternate routes to their destinations. Road blockages also create a response time concern for emergency services. There are no grade separated crossings of the CP track in the downtown area between Talbot Street and Quebec Street and long trains can block this entire distance. The safety concerns associated with pedestrians crossing multiple tracks, and the opportunity to create an uninterrupted north-south corridor for emergency vehicles makes this at-grade crossing location the City's highest priority for a new grade separation.

The Rail Rationalization Study confirms the City's continuing approach of planning for strategic grade separations rather than pursuing large scale relocation / rerouting of CP operations.

Providing a new road-rail grade separation on Adelaide Street at the CP crossing will increase roadway safety by removing the potential for conflict between pedestrians, cyclists, drivers and CP operations, improve traffic flow / operations by managing congestion and provide route reliability for emergency services and local transit.

The implementation of the grade separation will support the Rapid Transit (RT) initiative by providing vital parallel roadway network improvements to facilitate the rapid transit implementation. The improved transportation network performance, reliability and efficiency on Adelaide Street will benefit the London Transit / Transit Priority network and the connection to the BRT network at the King Street stop.

The project provides an opportunity to improve active transportation choices / facilities and linkages. The project also creates the opportunity to improve safety and mobility for all road users as well as contribute to the neighbourhood setting with a lively streetscape / urban design.

ES5 Planning Alternatives

Phase 2 of the Municipal Class EA involved identifying alternative planning solutions. The following alternatives were assessed against their ability to reasonably address the problems and opportunities, in consideration of the constraints identified in the early stages of the study:

1. Do Nothing; Intersection Improvements;
2. Transportation Demand Management;
3. Traffic Capacity Improvements; and
4. Grade Separation.

Based on public feedback received at PIC 1, the project team expanded the range of potential planning solutions to include:

5. Change in CP Rail Operations; and
6. Partial Grade Separation.

As noted above and discussed in **Chapter 2** of the ESR, the City's Rail Rationalization Study addressed the broader questions related to CP (and CN) operations within the City of London.

Recommended Planning Solution

The evaluation process concluded that the preferred planning solution includes: Grade Separation; and Intersection Improvements. This solution directly addresses the primary problems and opportunities in the long term. This solution will separate rail traffic from vehicles, transit, cyclists and pedestrians, improving safety of all users and increasing the reliability of the transportation network. This should result in a reduction in cut-through traffic onto local streets. This solution provides an opportunity to improve the streetscape, creating a safe and welcoming space for pedestrians and contributing to the surrounding neighbourhood.

ES6 Design Alternatives

Phase 3 of the Municipal Class EA process involved the generation and evaluation of design alternatives for the following aspects of the overall design:

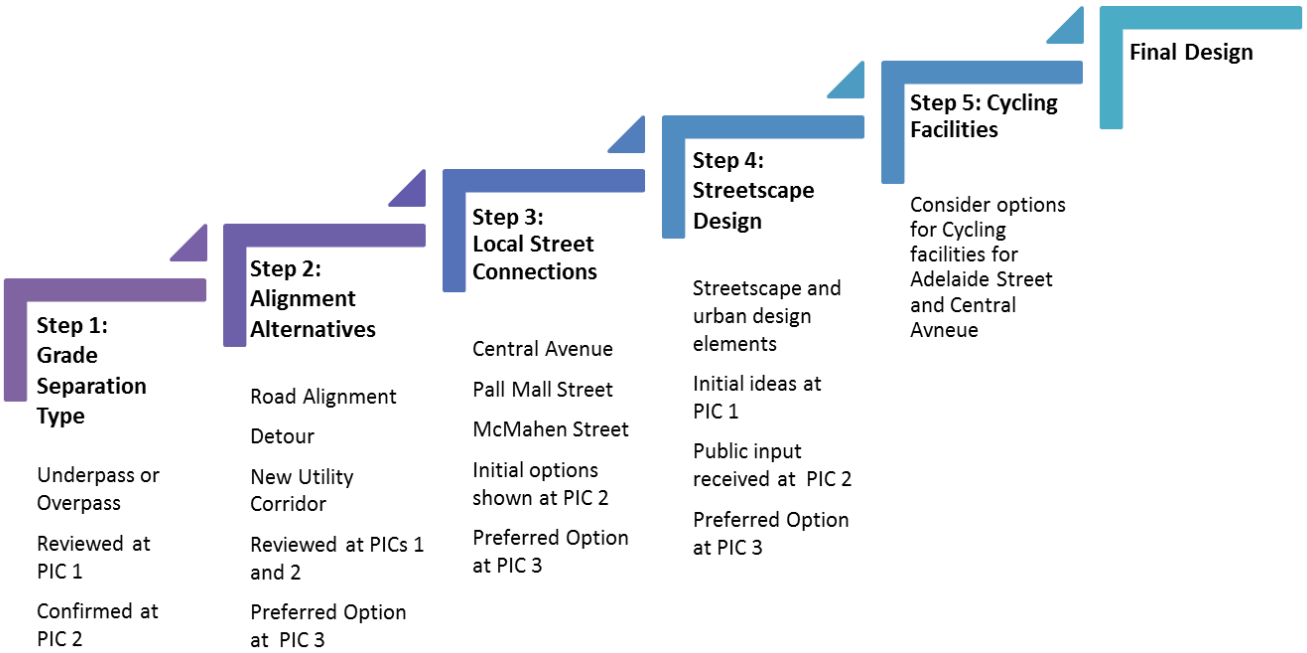
- Grade separation type (underpass or overpass);
- Alignment alternatives (for road, detour and utility / service corridor);
- Local street connections for Central Avenue, Pall Mall Street and McMahen Street;
- Streetscape design; and
- Cycling Facilities.

The evaluation of design alternatives was a step-wise process with decisions and outcomes of steps predicated on previous outcomes / decisions. The following graphic depicts this process and when various design alternatives were reviewed with the public.

Design Alternative Evaluation Process

Design is a step-wise process with each step building upon known conditions / constraints and decisions made previously.

As the design progresses and our knowledge of conditions / constraints evolve, there may be design iterations



Numerous factors influenced the generation, assessment, and evaluation of the design alternatives, for example:

- Community mobility, connectivity, character and direct community feedback / input; integration with surrounding community (context sensitive design), streetscape and urban design;
- Safe multi-modal transportation choices and the creation of a comfortable pedestrian and cycling environment that encourages these activities;
- Minimizing impacts to properties and businesses,
- McMahen Park Gates, trees and open space;
- Protecting cultural heritage resources;
- Cultural Heritage resources, adjacent Heritage Conservation Districts
- Technical factors including: utilities and municipal services, transportation network, road design, stormwater and groundwater management, constructability, cost;
- CP Operations including opportunities to modify CP infrastructure, operational constraints such as maximum closure periods etc.

ES7 Preferred Plan Summary

Based on the evaluation of design alternatives, the Preferred Plan consists of the following key aspects:

- Underpass Grade Separation: The underpass, or subway, is preferred because there are fewer property impacts, relatively little visual intrusion to surrounding community; decreased traffic noise from roadway; maintains intersections of local streets; more attractive to pedestrians and cyclists; preferred by community (when compared to the overpass design alternative).
- New rail structures consisting of two single-span through plate girder bridges with reinforced concrete abutments. The span is approximately 31.0 m. Minimum vertical clearance through the underpass is 5 m. One option under consideration for in-place construction is the “Trestle and Lift-In Place Method”.
- A new pump station located on the west side of Adelaide Street North, just north of Central Avenue. The stormwater pump station will be designed alongside an underground stormwater detention facility designed to retain the 100-year storm

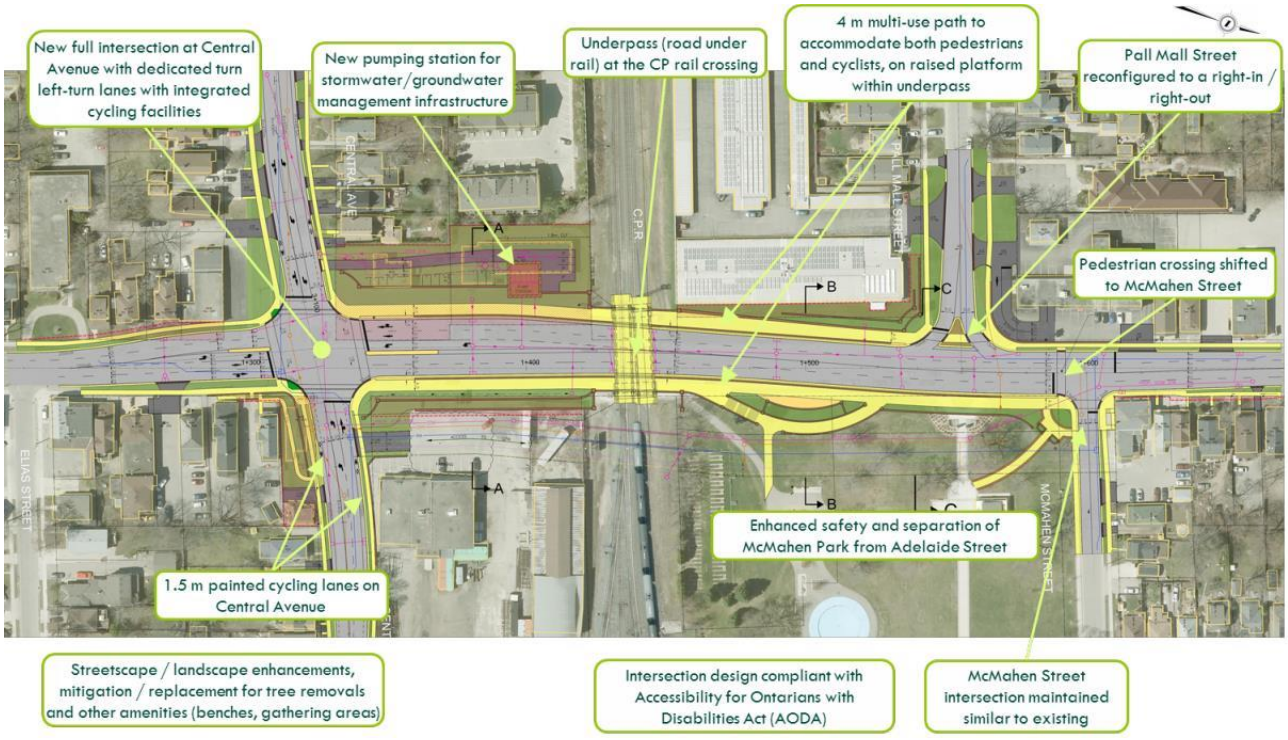
event. The pump station will be designed with two (2) inlet gravity sewers. One pipe will accommodate the storm drainage from the Adelaide Street road drainage system while the second pipe will carry groundwater flow. Once discharged in the station wet well, stormwater is pumped through an oil/grit separator to the underground storage detention facility. Ultimately, all pumped stormwater is conveyed to the local downstream storm sewer at the intersection of William Street / Central Avenue where it is conveyed to an existing outlet at the Thames River. The groundwater system will outlet into a separate wet well and be pumped to a separate underground storage detention facility for possible treatment, as required. The stored water will then be conveyed and enter the local sanitary sewer or storm sewer system. Treatment and outlet will be confirmed during detail design. Potential treatment requirements and outlet locations will be confirmed during detail design.

- 'Central' Alignment of Adelaide Street: minimizes overall property impacts, maintains straighter road which is better for users, maintains local street fabric / connections and minimizes impacts to CP infrastructure.
- Temporary road detour on east side of Adelaide Street: maintains north-south traffic including emergency services during construction, avoids permanent property impacts beyond those required for grade separation, utilizes same footprint as the new service / utility corridor. The temporary road detour was assumed having 4 lanes for the EA assessment. However, based on further consultation with CP, the implication on railway operational safety, significant impacts to the rail yard infrastructure, and costs, may deem the detour not feasible with 4 lanes. It is possible that a 2-lane detour be implemented, pending further review and design with CP.
- A new service and utility corridor on east side of Adelaide Street: minimizes permanent property impacts and integrates well with the proposed temporary road detour.
- Central Avenue full intersection: improved safety of all users, improved transportation / active transportation network and community connectivity, improved traffic operations. Includes dedicated left turn lanes and proposed painted cycling lanes on Central Avenue.
- Pall Mall Street right-in / right-out: maintains access to southbound Adelaide Street. Left-turn movements removed for safety, given proximity to underpass.
- McMahen Street: maintain existing intersection. Signalized pedestrian crossing will be shifted to McMahen Street. Traffic signals are not being recommended at

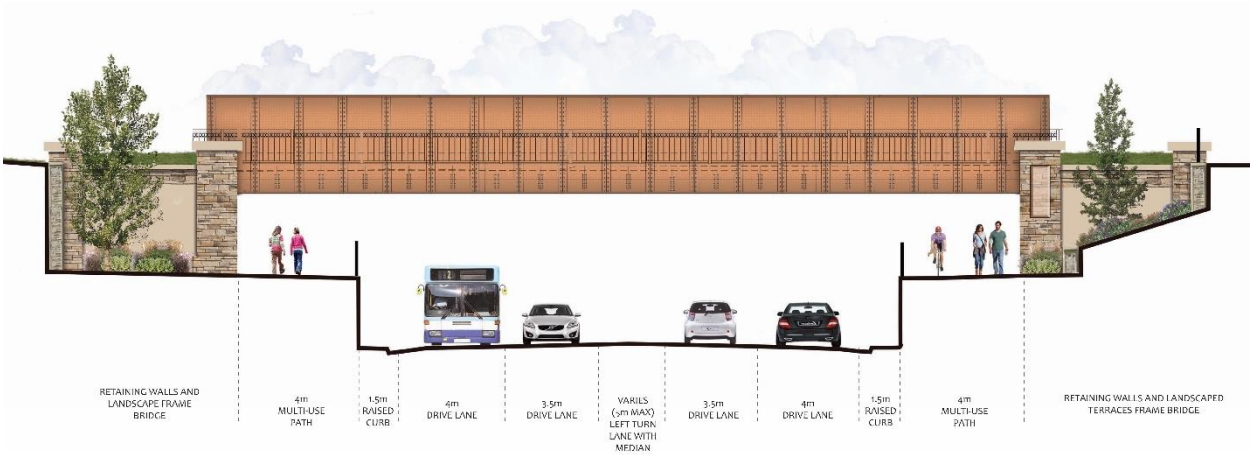
this time due to additional property impacts and concerns of attracting more cut-through traffic from Oxford Street.

- McMahen Park will be elevated above Adelaide Street and separated from vehicle traffic by railing, terraces and landscaping creating a more intimate park setting.
- The existing gateway to McMahen Park, opposite Pall Mall Street, will be relocated to the southeast corner of the McMahen Street intersection.
- Cycling facilities that include:
    - Adelaide Street North - 4 m multi-use path on the raised platform within the underpass, connecting to Pall Mall / McMahen Street and Central Avenue;
    - Central Avenue – painted 1.5 m bike lanes, with intersection design to connect to cycling facility on Adelaide Street North;
    - Pall Mall Street / McMahen Street – signed bike route with appropriate signage to facilitate the connection at McMahen Street pedestrian crossing will be developed in detailed design.
- A Streetscape Design Concept, strongly based on community feedback, that integrates the underpass with the surrounding neighbourhood.

Preferred Plan Overview



Adelaide Street North Road Cross-Section through the Underpass

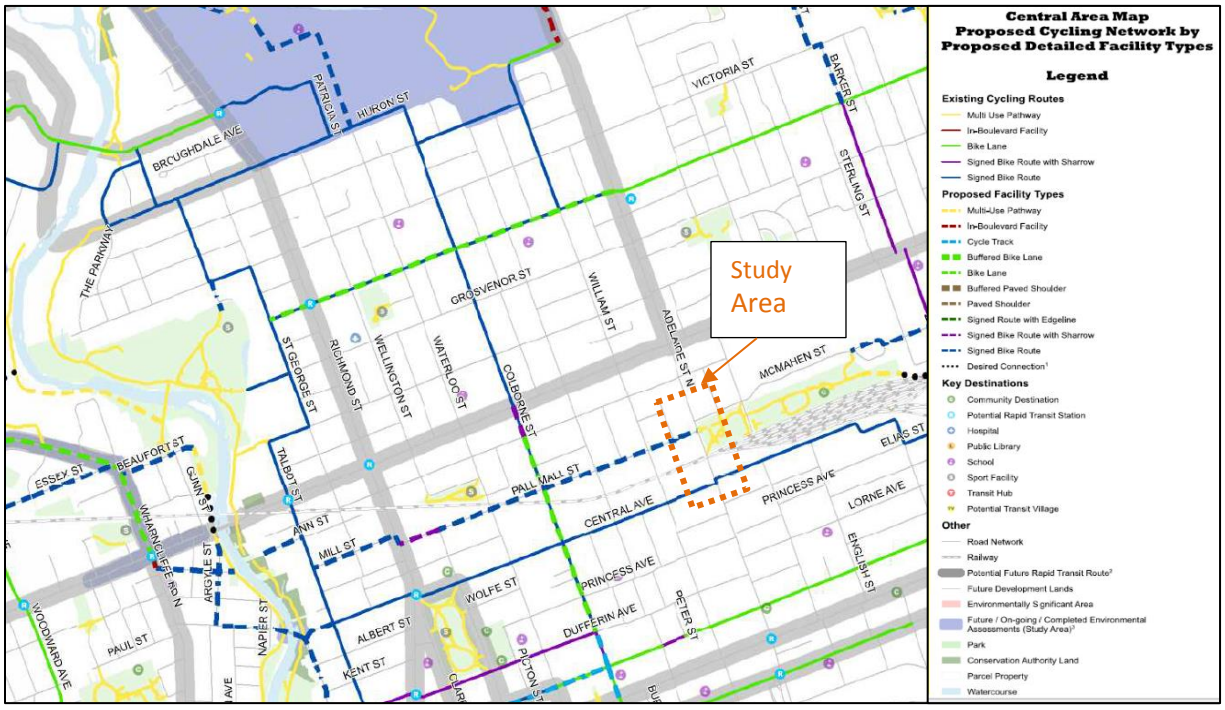


Cycling Facilities

The 2016 Cycling Master Plan identified the following components of the cycling network, in the study area:

- Existing Signed Bike Route on Central Avenue;
- Proposed Signed Bike Route on Pall Mall, starting at Adelaide Street;
- Proposed Signed Bike Route on McMahen Street for a short segment, east of Adelaide Street; and
- No facilities were identified on Adelaide Street North, within the study area

Cycling Master Plan (2016) Excerpt



This project has provided an opportunity to review the existing and proposed cycling network within the study area and provide updated recommendations for network connections and facilities in the context of the proposed transportation improvements.

The intent to accommodate cyclists through the underpass was recognized early in Phase 3, given the long-term investment and structure life-span of the underpass.

As discussed in **Chapter 5** of the ESR, early design concepts reflected the intent to provide space within the paved shoulder for on-road cyclists.

The preliminary preferred design, depicted conceptually at PIC 3, included 3 m shoulders at street level on Adelaide Street North. Cyclists who did not wish to be on the road could utilize the 3 m pathway within the raised platform of the underpass – a space that would be shared with pedestrians.

In response to the public feedback received at and following PIC 3, and through further review within the project team, two further cycling design options for Adelaide Street were developed and reviewed. The two options reviewed in the final stages of the Class EAs study (**Chapter 5**) were:

- Option 1 - provide a separated cycling facility by providing a minimum 4.0 m wide multi-use pathway (MUP) on the raised platform through both sides of the underpass. This MUP would be used by cyclists and pedestrians on both sides of the road.
- Option 2 - provide 3 m pedestrian sidewalks on a raised platform through the underpass and 3 m separated bike lanes (e.g. cycle track), at street level.

Given that Adelaide Street North is not proposed to have on-street designated / separated cycling facilities downstream and upstream of the grade separation, the project team concluded that a cycling connection through the grade separation does not need to be at street level. It is believed that cyclists approaching the underpass (whether coming from Adelaide, Central or Pall Mall Street / McMahan Street) will prefer to avoid the full grade change on the street (6%) by using the MUP which would be elevated above street level and therefore will require less effort to pass through.

Option 1 is viewed as “more comfortable” for a broader range of users (e.g. all ages and abilities) because of the greater separation from motor vehicles.

Even if Option 2 were selected, there will always be some cyclists who will not be comfortable cycling at street level.

A key advantage of Option 1 is less maintenance effort and cost.

Therefore, the preferred option for the cycling facility on Adelaide Street North, is for a 4 m multi-use path on the raised platform within the underpass, connecting to Pall Mall / McMahen Street and Central Avenue.

The design of the cycling facility on Central Avenue has evolved through discussion with stakeholders, the community and City staff. The Cycling Master Plan identified Central Avenue for a signed bike route. However, the design concept shared with the public at

PIC 3 reflects to City's intent to provide painted on-road bike lanes on Central Avenue with integrated cycling facilities at the Adelaide Street North intersection. Further review of the design and impacts of the cycling facilities

A signed bike route on Pall Mall Street and McMahen Street, per the Cycling Master Plan, will connect to the multi-use path on Adelaide Street North. Appropriate signage to facilitate the connection at McMahen Street pedestrian crossing will be developed in detailed design.

Streetscape Design

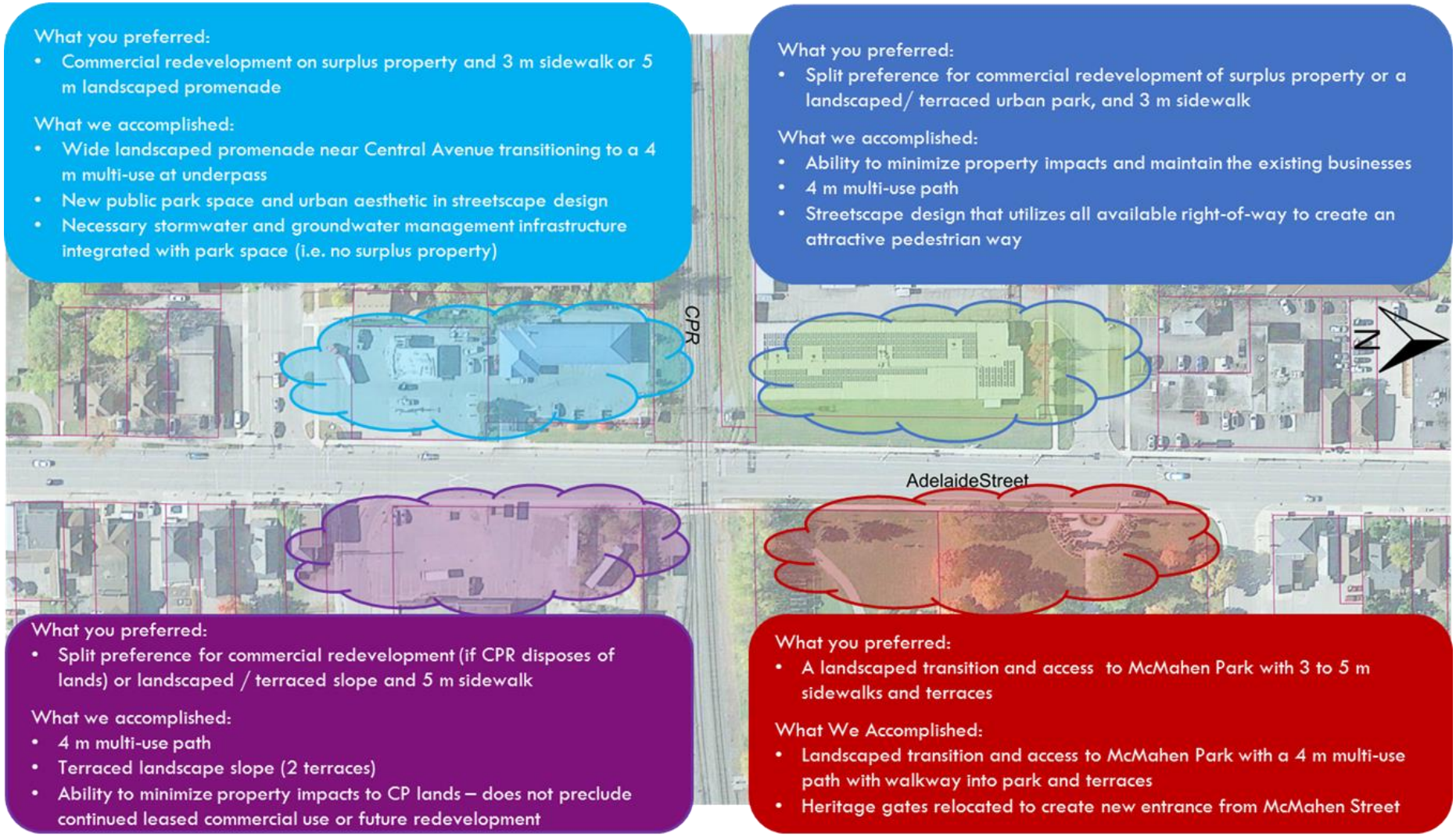
The development of the Streetscape Design Concept was an iterative process, based on the technical design requirements and the evolving understanding of design constraints, the definition of the 'public' realm (i.e. areas beyond the roadway available for streetscape design) and input from all City departments, Community Association representatives and members of the public. The streetscape concept was prepared based on the following principles:

- Integrate the underpass visually into the surrounding neighbourhood;
- Minimize impacts to buildings, property and businesses;
- Create a pedestrian-friendly, safe and vibrant streetscape;
- Establish and maintain pedestrian and cycling connections between destinations across and along Adelaide Street North;
- Frame and enhance the new bridge through aesthetic treatments that provide a visual amenity to the community, create opportunities for neighbourhood identity features and reference heritage architectural styles and patterns, and identify opportunities for new and enhanced public spaces.

Community input was vital to the development of the streetscape concept plan. Proactive and direct feedback from representative of the Piccadilly, Woodfield and Old East Village Community Associations and the Old East Village BIA was incorporated into the design, as feasible for this conceptual stage of design.

The PIC 2 / Workshop was instrumental in obtaining meaningful community feedback on specific streetscape design elements such as sidewalk configuration, side treatments, pedestrian space, aesthetic and theming opportunities, and landscape design. The exhibit below summarizes community preferences and feedback from the Workshop and what has been achieved in the streetscape design concept.

Summary of Public Input to the Streetscape Design and How It Was Addressed



View North at Adelaide Street North and Central Avenue

Streetscape Concept

A. Low retaining walls with decorative treatments and landscape, frame intersection and approach to new bridge.

B. Pillar and wall treatment reflect local architecture.

C. Ramp and stairs maintain access to business from street.

D. Rear parking access.

E. A linear parkette creates opportunities to incorporate wildflowers and rain gardens. Community events or exhibitions / installations could also occur in the parkette in the future.

F. Pump station can feature architectural detailing to blend into the community fabric.

G. Parking and access for pump station.

H. Landscaped terraces with decorative retaining walls and pillars.

I. Opportunities to incorporate design elements into the bridge will be reviewed with CPR. Otherwise these elements can be provided adjacent to the CPR right-of-way to create a similar visual impact.

J. Elevated walkway reduces walking distance, raises sidewalk and multi-use path above street.

K. Landscaped terraces.

L. Ramps/stairs provide access to park from sidewalk (elevated walkway).

M. McMahen Park will be elevated above Adelaide Street and separated from vehicle traffic by railings, terraces and landscaping, creating a more intimate park setting and enhancing the experience and safety of the park.

N. McMahen Gate relocated to new park entrance at corner.

ES8 Preliminary Property Requirements

Significant efforts have been made during the Class EA study to minimize property impacts, including:

- Maintaining a central alignment of Adelaide Street North;
- Providing the traffic detour and utility corridor along the east side of Adelaide Street North;
- Providing a 'best-fit' design for the realigned Central Avenue intersection; and
- Maintaining the existing connections to Adelaide Street North from Pall Mall Street and McMahen Street (although access to Pall Mall Street will now be restricted).

Despite these measures, some sections of the Preferred Plan have a substantial change in the road profile and therefore impacts to properties will be unavoidable. The complete list of property impacts is provided in the table below.

The Preferred Plan will have full or partial impacts to 17 properties. Approximate property impacts are summarized in the table below. Discussions between the Project Team and property owners during the EA regarding these impacts and potential accommodations are noted in **Chapter 7** of the ESR. Minor impacts to driveway re-grading or to City owned property are not included in the overall study impacts.

- Four properties have been identified as likely to be fully impacted due to road grade changes and closure of access to Adelaide Street. These are: 595 Adelaide Street (Food Mart / Petro Line), 600 Adelaide Street (southeast corner of Adelaide Street and Central Avenue), 627 Central Avenue (residential property east of Adelaide Street), and 625 Adelaide Street (AutoSpa Car Wash). None of these properties are included on the City of London Inventory of Heritage Resources as listed or designated.
- One property, 665 Adelaide Street (Storage Mart), is likely to have partial impacts to the building due to the construction of the retaining walls for the underpass. The extent of impacts to the building located on the east side of the property will be determined during detailed design in consultation with the owner.
- Thirteen properties are likely to have minor impacts to frontage with three of them potentially requiring some modifications to maintain access, as summarized below. The City will continue to work with the property owners to find an acceptable solution:

- 596 Adelaide Street North (Cat Hospital) will require reconfiguration of the Adelaide Street entrance to account for the new sidewalk elevation / grade.
- 682 Adelaide Street (Frank and Gus Pizza) will require reconfiguration of the storefront access on Adelaide Street to account for the new sidewalk elevation / grade. Access to the rear parking area will be maintained.
- 589 Adelaide Street (Northend Bodyshop) will require reconfiguration of the garage bay access to account for the closure of the access from Adelaide Street due to the road elevation / grade change.

The property at 620 Adelaide Street is owned by CP. Temporary and permanent impacts to this property are being discussed with CP as part of the overall design plan.

A cultural heritage resource assessment was carried out to identify built heritage values and cultural heritage landscapes within the study area. The Cultural Heritage Assessment Report (CHAR) is provided in **Appendix C.** Based on the Preferred Plan, the following summary is provided:

- None of properties identified as potentially being fully impacted are included on the City of London Inventory of Heritage Resources as listed or designated.
- One property, 596 Adelaide Street North – The Cat Hospital, is included on the City of London Inventory of Heritage Resources as a listed heritage property, Priority 1. The building will not be impacted; anticipated impacts are limited to the frontage of the property with changes to the existing access and landscaped garden.

Built cultural heritage resources will be reviewed once more in the context of the final design, and all appropriate documentation will be prepared to document potential impacts to heritage value.

Preliminary Property Requirements

Municipal Address	Type	Nature of Impact
571 Adelaide Street N RN: 20120019000000	Residential	Partial impacts – very minor edge impacts to frontage. Approximate area = 19 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.

Municipal Address	Type	Nature of Impact
577 Adelaide Street N RN: 20120018000000	Residential	Partial impacts – minor edge impacts to frontage. Approximate area = 16.5 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
579 Adelaide Street N RN: 20120017000000	Residential	Partial impacts – minor edge impacts to frontage. Approximate area = 46 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
585 Adelaide Street N RN: 20120016000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 71.5 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
589 Adelaide Street N RN: 20120015000000	Commercial	Partial impacts – edge impacts to frontage. Approximate area = 97 m^2 Potential full removal due to road lowering and access restrictions for underpass grade separation and intersection improvements.
595 Adelaide Street N RN: 20130067000000	Commercial	Full removal due to road lowering for underpass grade separation and intersection improvements.
596 Adelaide Street N RN: 30130039000000	Commercial	Partial impacts – edge impacts to frontage and access. Approximate area = 26.5 m^2 Included on the City of London Inventory of Heritage Resources as a listed heritage property, Priority 1.
600 Adelaide Street N RN: 30130001000000	Commercial	Full removal due to road lowering for underpass grade separation and intersection improvements. Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
620 Adelaide Street N RN: 30780198000000	Commercial/ Industrial	Partial impacts – edge impacts to frontage. Approximate area = 520 m^2 Permanent easement required for utility corridor.
625 Adelaide Street N RN: 20130060000000	Commercial	Full removal due to road lowering for underpass grade separation and intersection improvements.
665 Adelaide Street N RN: 20130059000000	Commercial	Partial impacts – edge impacts to frontage along Adelaide Street. Approximate area = 479 m^2 Partial impacts to south end of main building on east side of property due to construction of retaining walls for underpass

Municipal Address	Type	Nature of Impact
		grade separation. Extent of impacts to be determined in detailed design in consultation with owner.
682-686 Adelaide Street N RN: 30150076000000	Commercial	Partial impacts – edge impacts to frontage and front entrance from sidewalk. Approximate area = 7.5 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but 686 Adelaide Street N identified as having potential heritage interest.
688 Adelaide Street N RN: 30150078000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 10 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
692 Adelaide Street N RN: 30150079000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 20.5 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
698 Adelaide Street N RN: 30150080000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 13.5 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
700 Adelaide Street N RN: 30150081000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 6.5 m^2 Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
627 Central Avenue RN: 30130002000000	Residential	Full removal due to road lowering for underpass grade separation and intersection improvements.

ES9 Consultation

Consultation is documented in **Chapter 7** of the Environmental Study Report. A Notice of Study Commencement for the project was issued in February 23, 2016. A project page on the City's website was also launched at that time. Public feedback at the commencement of the study primarily related to CP operations, the need for a grade separation, cut-through traffic on residential streets, potential property and access

impacts, neighborhood connectivity, pedestrian and cyclist safety and potential for higher traffic volumes and noise.

As the owner of the railway, CP is an important project partner and will ultimately have approval of any proposed changes to their infrastructure. City staff have had ongoing communication with CP throughout the study.

There are four community and business associations with interest in the study area: Piccadilly Area Neighbourhood Association (PANA), Woodfield Community Association, and Old East Village Business Improvement Area (BIA) and Old East Village Community Association. Representatives from each these groups engaged City staff early in the study and have remained directly involved in the study process throughout. An initial meeting was convened with community representatives on May 24, 2016. A follow-up walking tour of the neighbourhood was held on October 6, 2016. A further meeting was convened on April 11, 2108 to review the proposed design, including the streetscape/ urban design concept in advance of Public Information Centre 3. The partnership with the community groups and business associations has been critical to the success of this EA the community associations have played a key role in raising the project profile and encouraging the broader community to particiapte in the study.

The first Public Information Centre (PIC) was held on June 16, 2016 and provided stakeholders with an opportunity to meet the project team, review the study scope, existing conditions, need and justification and planning alternatives. Approximately 140 people attended. Common verbal feedback heard at the PIC included:

- Change CP operations instead of constructing the grade separation;
- A grade separation is needed to alleviate traffic – strong preference for an underpass;
- Better pedestrian facilities are needed on Adelaide Street;
- Concern that an overpass will break up the neighbourhoods; and,
- Many cars cut through the neighbourhoods on the side streets when trains block Adelaide Street.

A comment sheet / questionnaire was provided at PIC 1 and posted on the City's website until August 31, 2016. A total of 125 comment sheets were received in this period. From the comment sheet / questionnaire, the highest rated issues were: travel delays due to frequent train crossing / road blockages; need for safe / comfortable sidewalks and cycling facilities; and improved air quality and noise. The most important

goals for the study, from the questionnaire, were to protect and improve pedestrian accessibility/walkability, develop a solution that contributes to a vibrant street and neighbourhood, ensure continued access to homes and businesses, and protect heritage value of neighbourhood.

Based on feedback received from the community associations and from the public at PIC 1, the project team's approach to public engagement was expanded to include one additional PIC / Workshop. This approach allowed the project team to better address the complex technical components of the study, respond to the high level of community interest and desire for direct involvement, and provide more opportunity for public input to the streetscape design to enhance the neighbourhood.

Public Information Centre 2 was held on December 14, 2016. The PIC consisted of a drop-in open house from 4:30 pm to 8:00 pm with a workshop component from 6:00 to 7:30 pm. The purpose of the PIC was to confirm the preferred planning solutions, describe the multi-step design process and present alternative design concepts (including grade separation type and side street connections), and actively develop a high-quality streetscape design through the Workshop. The workshop provided a more visual project interaction to gain feedback on specific elements such as sidewalk configuration, side treatments, pedestrian space, aesthetic and theming opportunities, and landscape design. Those not able to attend the workshop had an opportunity to provide input on these elements through the Engage London website. Approximately 60 people attended the PIC and almost all attendees participated in the workshop.

A comment sheet / questionnaire was provided at PIC 2 and posted on the City's website until January 31, 2017. A total of 26 written comments were received in this period. Common verbal and written feedback included:

- Strong preference for the underpass design;
- Understand the need for a grade separation but concern that it will separate the neighbourhoods;
- Concern about potential for increased noise associated with the grade separation and potentially higher traffic volumes on Adelaide Street;
- Suggestion for a signalized intersection at McMahen Street;
- Design for a friendly, safe, and secure space for pedestrians;
- Preference for dedicated bicycle lanes;
- Concern regarding property impacts;

- Concern for disruption to local businesses during construction; and
- Maintain the connection at Pall Mall Street and Adelaide Street.

Public Information Centre 3 was held on April 26, 2018. The purpose of this PIC was to review the community feedback received through PIC 2 and the Workshop, review the assessment of alternative design concepts for the grade separation, local street connections, new utility corridor and temporary road detour, present the Recommended Plan including Streetscape Design Concept, present the preliminary construction staging concept and overall implementation timeframes. Approximately 100 people attended. A total of 57 written comments were received in this period. Common verbal and written feedback included:

- Strong support for the underpass design;
- Very positive feedback for the streetscape design;
- Positive feedback on the design of the Central Avenue intersection;
- Community 'feels they have been heard' and design is reflective of the community feedback given during the study;
- Questions regarding the timing of the design and construction; support for construction commencing 'right away';
- Some concern about temporary loss of use of parts of McMahen Park during construction but support for park revitalization post-construction; and
- Some concern about potential for traffic infiltration to neighbourhoods and interest in providing traffic calming during construction.

ES10 Construction Staging

The project is expected to be implemented in a 3 to 5-year timeframe. Construction timing is subject to the completion of the Environmental Assessment process, property acquisition and CP concurrence. Due to the complexity of the project, the construction duration is expected to be approximately 24 to 28 months.

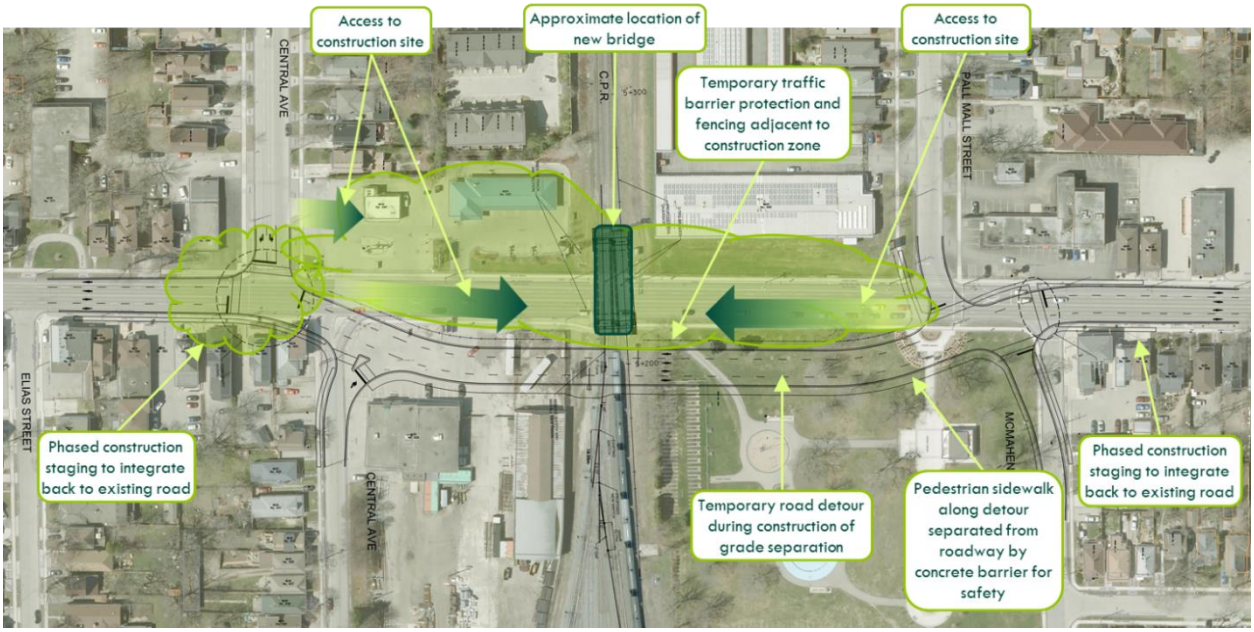
The project is a complex undertaking that involves numerous stages of construction including: bridge construction within CP technical and scheduling constraints; lowering of Adelaide Street by 6.5 m; intersection and road reconstruction; lowering of the Central Avenue intersection by 1.5 m; relocation and upgrade of existing municipal services, installation of new services, and construction of a pumping station; and relocation of major utilities to a new corridor.

The project team has been sensitive to the potential impacts of construction on local businesses and the community. It is proposed that a temporary road detour be provided around the construction area to minimize the duration of closure periods.

Most of the underpass construction can be completed ‘off-line’ with traffic routed around the construction area via the temporary road detour. Details of the construction staging will be refined during design phase of the project. Construction timing, duration, staging and traffic management will be fully developed during the future detailed design phase. It is anticipated that some construction activities will require short-term periodic lane closures or temporary lane reductions, for example:

- Relocation and installation of utilities and municipal services will involve short-term closures or lane reductions to through-traffic. Local streets will remain open to local traffic. A number of weekend closures will be required at intersections to complete utility crossings.
- Modifications to rail infrastructure will involve short-term closures to Adelaide Street (possible weekend closures).
- Longer closure / lane reduction to through-traffic will occur with the lowering of Adelaide Street to match the underpass road profile. Ideally this work will be planned during a single 4 to 6-week closure period on Adelaide Street. Local street traffic and walk-in access to businesses can likely continue via local streets during this period.
- Once Adelaide Street is lowered, it will be reopened to traffic. Local streets will then be lowered to match the new grade, with localized short-term closures.

Conceptual Construction Staging Plan with Detour



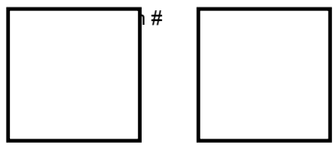
In the upcoming detailed design phase, the project team will take a proactive approach in direct discussions with affected property / business owners. The detailed design involves the spatial arrangement of all construction aspects and the detailed scheduling that will allow for efficiencies to be identified. The detailed construction plan and schedule will incorporate all utility relocations, municipal service upgrades and all aspects of the bridge and road works. The construction plan will inform the development of a traffic management plan including scheduling and duration of lane restrictions and full closures. This information will facilitate more meaningful discussion with and provide more certainty to property and business owners. The final design, construction staging and traffic management plan will be shared with the community at a public meeting, during the detailed design phase, and will be posted on the City's website for easy access.

ES11 Preliminary Cost Estimates

A preliminary construction cost for the Adelaide Street North grade separation is approximately $58.3 M. The cost estimate includes roadway construction, the railway grade separation bridge structure, CP railway infrastructure costs (i.e., yard modifications, flagging, etc.), municipal services and utility relocation, temporary road detour, traffic and pedestrian signals, pump station with storage facility, landscaping, staging, and property acquisition. The preliminary estimate for the project is

summarized below and this value will be used to update future capital budgets. Costs are in 2017 dollars. Cost sharing with CP is anticipated.

Item	Estimated Cost
Removals	1,139,000
Roadwork	10,826,000
Storm Sewers / Pump Station	8,779,000
CP Structure	9,832,000
Sanitary Sewer	567,000
Watermain	876,000
Temporary Work	660,000
Road Detour	2,027,000
Utility Relocation	4,440,000
CP Railway Infrastructure Costs	4,080,000
Property Acquisition	9,800,000
Engineering	5,250,000
TOTAL	**58,276,000**



Frank Gerrits
MN-8894

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE**
FROM:	**GEORGE KOTSIFAS, P. ENG. MANAGING DIRECTOR, DEVELOPMENT AND COMPLIANCE SERVICES AND CHIEF BUILDING OFFICIAL**
SUBJECT:	**APPLICATION BY: BEN BILLINGS / SPRINGHILL FLOWERS STREET RENAMING PORTION OF PLEASANTVIEW DRIVE (FROM SOUTH WENIGE DRIVE TO ROLLINGACRES) TO ROLLINGACRES DRIVE AND PLEASANTVIEW DRIVE (SOUTH OF WATERWHEEL ROAD) TO PLEASANTVIEW COURT MEETING ON AUGUST 14, 2018**

RECOMMENDATION

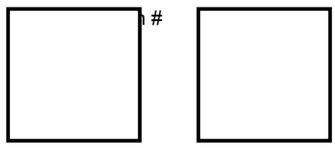
That, on the recommendation of the Director, Development Services, the following actions be taken with respect to the renaming of the portion of Pleasantview Drive (between South Wenige Drive and Rollingacres Drive) to Rollingacres Drive and the portion of Pleasantview Drive (south of Waterwheel Drive) to Pleasantview Court:

a) a public meeting for the proposed renaming of the portion of Pleasantview Drive (between South Wenige Drive and Rollingacres Drive) to Rollingacres Drive and the portion of Pleasantview Drive (south of Waterwheel Drive) to Pleasantview Court, **BE SCHEDULED**, the following being noted:

- notice will be given advertising the public participation meeting;
- the Applicant will be required to pay for the cost of the advertising and change of street signage; and
- the Applicant will be required to compensate any property owner $200.00 for incurred costs associated with the municipal address change as a result of the street name change.

BACKGROUND

These sections of Pleasantview Drive were originally created through two registered plans, 33M-451 on September 20, 2002 and 33M-484 on March 31, 2004. It was originally intended that The subdivision surrounding the development site (1140 Sunningdale) originally intended to have a connection between the west end of Pleasantview Drive and the east end, through the lands of 1140 and 1154 Sunningdale Road East, with the completed street to run slightly north of and parallel to Sunningdale Road.



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In 2017, two consent applications were submitted to the City of London:

- B.034-17 - for 1140 Sunningdale Road East, requesting to sever six (6) lots, each from 1140 Sunningdale Road East for the purpose of future residential uses and to retain 3,750 m^2 for the purpose of future commercial uses.

- B.035-17 for 1154 Sunningdale Road East, requesting to sever six (6) lots, each from 1154 Sunningdale Road East and to sever approximately 770 m^2 which will be conveyed to 1140 Sunningdale Road East for the purpose of future residential uses and future commercial uses respectively, retaining the balance for the existing residential use.

Through the review process of the consent applications and related re-zoning, it was determined that the connection between these two streets was not achievable and would not be a requirement for the approval of the consent application. However, the Consent Authority imposed a condition related to the renaming of streets (Condition 19):

> *"That prior to issuance of certificate of consent, the Owner shall make the necessary arrangements with the City and assume the costs to rename all or a portion Pleasantview Drive and/or change the Municipal Addresses of properties on all or portion of Pleasantview Drive. The owner shall pay all expenses, inclusive of application fee, advertising costs, sign replacements, by-law fee and a fee of $200 per household for their inconvenience and to help offset some of their costs to change their address."*

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Figure 1 – Pleasantview Drive – Easterly from South Wenige Drive easterly to Rollingacres Drive

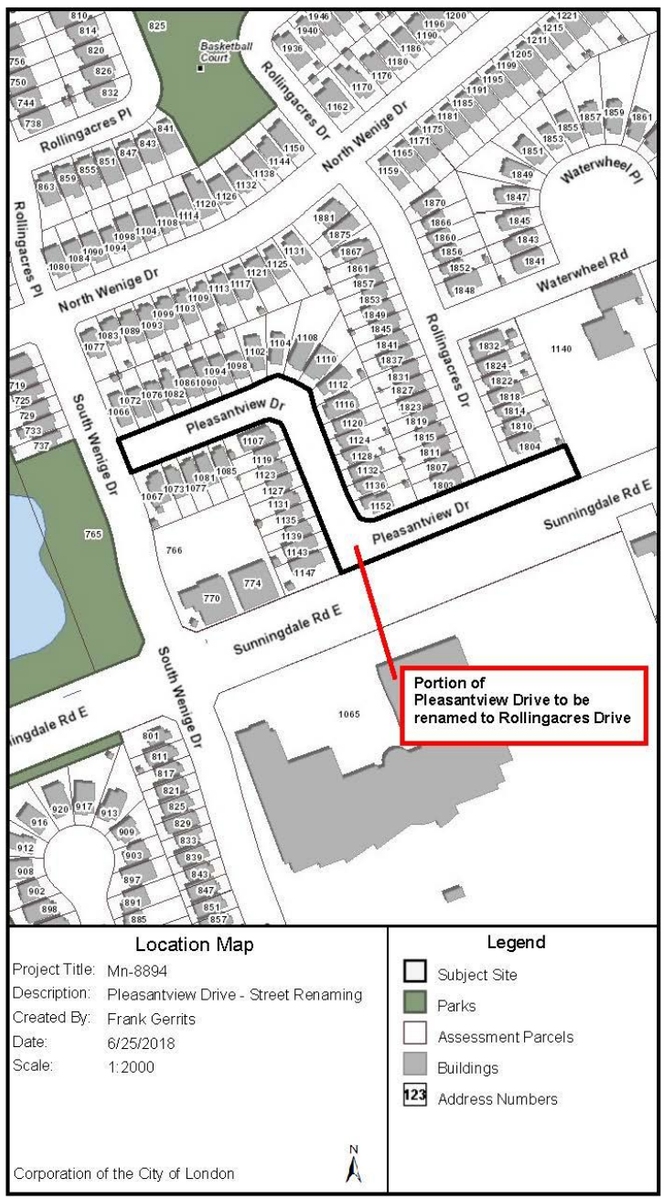

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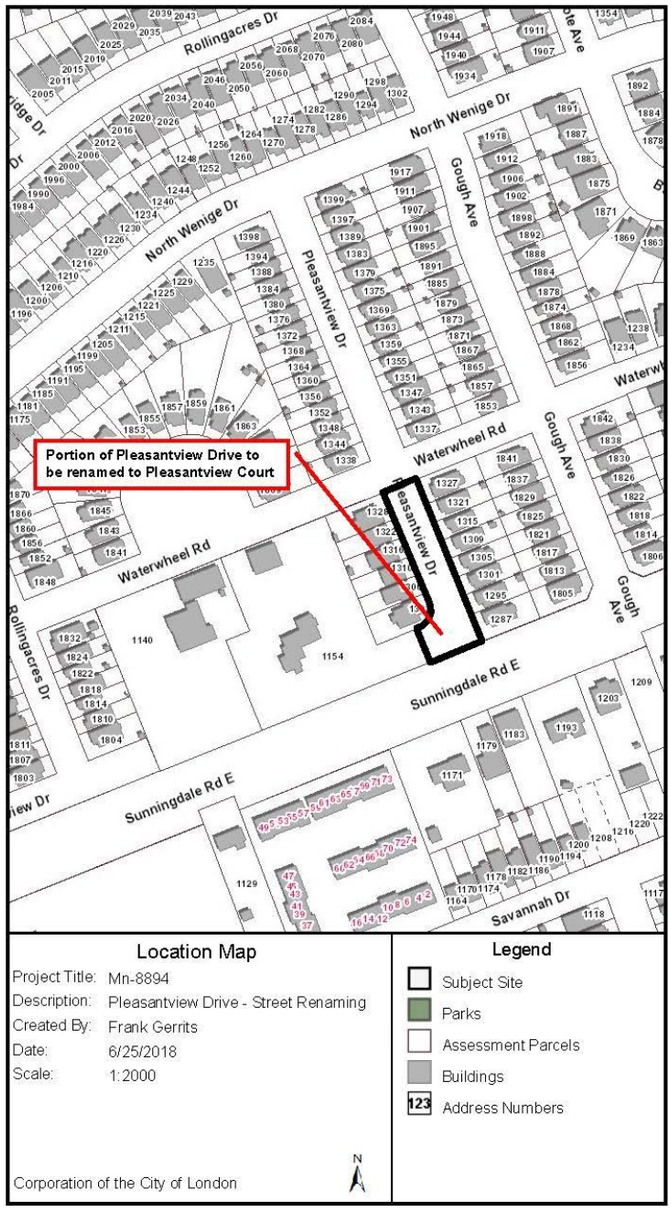
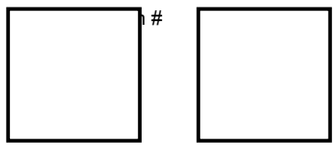
Figure 2 - Pleasantview Drive – South from Waterwheel Road



The Applicant shall be required to financially compensate the property owners for a change in address. Council has previously approved compensation of two hundred dollars ($200) for private residences. In total, between the two sections of Pleasantview Drive, forty eight (48) residences will be affected by this change.

Street Signs will be required to be replaced (approximately $500.00 plus taxes per sign, installed). After the public consultation process, staff will communicate to the Applicant the cost allocation and anticipated expenses associated with the sign replacement.



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The Municipal Addressing Advisory Group has not been consulted on this application. No concerns were raised as the proposed street names are already existing and the street suffixes are not problematic.

Consultation with emergency service providers and other agencies, such as Canada Post Corporation (CPC) will be necessary to ensure a streamlined transition of the street name change. Canada Post Corporation has in the past provided six month free re-direction mail service.

CONCLUSION

Staff recommend that a public meeting be scheduled regarding the renaming of the portion of Pleasantview Drive (between South Wenige Drive and Rollingacres Drive) to Rollingacres Drive and the portion of Pleasantview Drive (south of Waterwheel Drive) to Pleasantview Court. The Applicant shall be required to pay for the cost of advertisement, signage replacement on a full cost recovery basis, as well as compensation to the property owners.

PREPARED BY:	**REVIEWED BY:**
FRANK GERRITS **SUBDIVISION DOCUMENTATION COORDINATOR**	**LISA MUGFORD** **COORDINATOR, DEVELOPMENT AND COMPLIANCE**
RECOMMENDED BY:	**SUBMITTED BY:**
PAUL YEOMAN, RPP, PLE **DIRECTOR, DEVELOPMENT SERVICES**	**GEORGE KOTSIFAS, P. ENG.** **MANAGING DIRECTOR, DEVELOPMENT AND COMPLIANCE SERVICES & CHIEF BUILDING OFFICIAL**

FG/LM/PY/GK/fg
Attach.
June 25, 2018

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DEFERRED MATTERS

CIVIC WORKS COMMITTEE
(as of August 2, 2018)

Item No.	File No.	Subject	Request Date	Requested/ Expected Reply Date	Person Responsible	Status
1.	44	**Potential Savings in Consulting Costs** Civic Administration to review and report back on areas that the City of London could realize consulting cost decreases for capital projects through the addition of new staff, rather than contracting out those consulting services, so that the City of London would realize net savings.	June 2/15	2nd Quarter 2018	K. Scherr	**IN PROGRESS**
2.	75.	**Options for Increased Recycling in the Downtown Core** That, on the recommendation of the Director, Environment, Fleet and Solid Waste, the following actions be taken with respect to the options for increased recycling in the Downtown core: b) the Civic Administration BE DIRECTED to report back to the Civic Works Committee in May 2017 with respect to: i) the outcome of the discussions with Downtown London, the London Downtown Business Association and the Old East Village Business Improvement Area; ii) potential funding opportunities as part of upcoming provincial legislation and regulations, service fees, direct business contributions, that could be used to lower recycling program costs in the Downtown core; iii) the future role of municipal governments with respect to recycling services in Downtown and Business Areas; and, iv) the recommended approach for increasing recycling in the Downtown area.	Dec 12/16	4th Quarter 2018	K. Scherr J. Stanford	
3.	76.	**Rapid Transit Corridor Traffic Flow** That the Civic Administration BE DIRECTED to report back on the feasibility of implementing specific pick-up and drop-off times for services, such as deliveries and curbside pick-up of recycling and waste collection to local businesses in the downtown area and in particular, along the proposed rapid transit corridors.	Dec 12/16	4th Quarter 2018	K. Scherr E. Soldo	

4.	78.	**Garbage and Recycling Collection and Next Steps** That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, with the support of the Director, Environment, Fleet and Solid Waste, the following actions be taken with respect to the garbage and recycling collection and next steps: b) the Civic Administration BE DIRECTED to report back to Civic Works Committee by December 2017 with: i) a Business Case including a detailed feasibility study of options and potential next steps to change the City's fleet of garbage packers from diesel to compressed natural gas (CNG); and, ii) an Options Report for the introduction of a semi or fully automated garbage collection system including considerations for customers and operational impacts.	Jan 10/17	Part b) i) – 3rd Quarter, 2018 Park b) ii) – 4th Quarter, 2018	K. Scherr J. Stanford	
5.	79.	**Update and Next Steps - Resource Recovery Strategy and Residual Waste Disposal Strategy as Part of the Environmental Assessment Process** That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, with the support of the Waste Management Working Group, the following actions be taken with respect to the development of London's Long-Term Solid Waste Resource Recovery Strategy and Residual Waste Disposal Strategy as part of the Environmental Assessment (EA) process (Phase One - Prepare Terms of Reference and Phase Two – Undertake EA): e) the Civic Administration BE DIRECTED to report back to the Civic Works Committee with an Interim Update Report and the Final Draft Terms of Reference, which would incorporate a public participation meeting to conclude Phase One activities.	Oct 24/17	3rd Quarter 2018	K. Scherr J. Stanford	

6.	89.	**6th Report of the Transportation Advisory Committee** That the following actions be taken with respect to the 6th Report of the Transportation Advisory Committee, from its meeting held on May 23, 2017: a) the Transportation Advisory Committee (TAC) Terms of Reference BE REFERRED to the Civic Administration to review and report back to the Civic Works Committee with respect to a review of the overlapping of Advisory Committee mandates of the Cycling Advisory Committee and the Transportation Advisory Committee.	June 7/17	1st Quarter 2019	K. Scherr E. Soldo City Clerk	
7.	91.	**Warranted Sidewalk Program** That the following actions be taken with respect to the Warranted Sidewalk Program: a) the Managing Director, Environmental and Engineering Services and City Engineer BE REQUESTED to develop an improved community engagement strategy with respect to Warranted Sidewalk Program; and, b) the Managing Director, Environmental and Engineering Services and City Engineer, BE REQUESTED to report back to the Civic Works Committee with respect to the potential future provision of additional sidewalk installation options on the east side of Regal Drive in the Hillcrest Public School area; it being noted that currently planned work would not be impeded by the potential additional work; it being further noted that the Civic Works Committee received a delegation and communication dated September 22, 2017 from L. and F. Conley and the attached presentation from the Division Manager, Transportation Planning and Design, with respect to this matter.	Sept 26/17	4th Quarter 2018	K. Scherr E. Soldo	
8.	93.	**Public Notification Policy for Construction Projects** That the Civic Administration BE DIRECTED to amend the “Public Notification Policy for Construction Projects” to provide for a notification process that would ensure that property owners would be given at least one week’s written notice of the City of London’s intent to undertake maintenance activities on the City boulevard adjacent to their property; it being noted that a communication from Councillor V. Ridley was received with respect to this matter.	Nov 21/17	3rd Quarter 2018	E. Soldo	

9.	94.	**Report on Private Works Impacting the Transportation Network** b) report back to the Civic Works Committee, by the end of March 2018, on: i) ways to improve communication with affected business, organizations and residents about the timing, duration and impacts of permits for approved works, including unexpected developments; ii) ways to improve the scheduling and coordination of private and public projects affecting roadways and sidewalks that carry significant pedestrian, cyclist, transit and auto traffic; iii) resources required to implement these improvements; and any other improvements identified through the review iv) resources required to implement these improvements; and	Dec 4/17	3rd Quarter 2018	K. Scherr G. Kotsifas	
10.	96.	**Hydro One Grant for Tree Planting** That the following actions be taken with respect to the Hydro One grant for tree planting a) the Managing Director, Environmental and Engineering Services and City Engineer BE DIRECTED to investigate and report back on possible options to address the noise impacts being experienced by homes abutting Highbury Avenue resulting from the recent removal of trees by Hydro One, including the costs for implementing such options; it being noted that the Civic Administration would, as part of the investigation, review the City's policy on local improvements, as it related to noise attenuation barriers, as well as past projects;	Nov. 28/17	4th Quarter 2018	K. Scherr E. Soldo	

11.	98.	**Private Drain Connection (PDC) Projects** That the Director of Water and Wastewater BE REQUESTED to review the Wastewater and Stormwater By-law WM-28 as it relates to fees and charges for Private Drain Connections (PDC) work undertaken as part of a City of London construction projects and report back with respect to a potential blended fee for mixed use properties that is reflective of a balanced charge between the current residential and commercial fees; it being noted that a communication dated January 16, 2018, from Councillor T. Park was received related to this matter.	Feb. 6, 2018	2nd Quarter 2018	S. Mathers	
12.	99.	**Pedestrian Sidewalk – Pack Road and Colonel Talbot Road** That the communication from J. Burns related to a request for a pedestrian crosswalk at the intersection of Pack Road and Colonel Talbot Road BE REFERRED to the Division Manager, Transportation Planning and Design for review and consultation with Mr. Burns as well as a report back to the appropriate standing committee related to this matter.	Feb. 6, 2018	4th Quarter 2018	D. MacRae S. Maguire	
13.	102.	**Garbage Cycles and Holidays** That the Civic Administration BE REQUESTED to review the 2019 waste pick up calendar and report back to the Civic Works Committee with a recommendation related to the best dates in the Spring for the unlimited container pick up.	April 17, 2018	2nd Quarter 2018	K. Scherr	
14.	103.	**Clear Garbage Bags** That the Civic Administration BE DIRECTED to investigate and report back with a potential implementation strategy regarding the use of clear garbage bags as part of the 60% Waste Diversion and Action Plan.	May 28, 2018	TBD	J. Stanford	
15	104	**Toilets are Not Garbage Cans** That the Civic Administration BE REQUESTED to undertake the following with respect to the "Toilets Are Not Garbage Cans" public awareness sticker initiative, coordinated by B. Orr, Sewer Outreach and Control Inspector	June 19, 2018	TBD	J. Stanford B. Orr	

16	105	**Environmental Assessment** That the Managing Director, Environmental and Engineering Services & City Engineer BE REQUESTED to report on the outstanding items that are not addressed during the Environmental Assessment response be followed up through the detailed design phase in its report to the Civic Works Committee.	July 25, 2018	TBD	K. Scherr	