Agenda Including Addeds
Civic Works Committee

9th Meeting of the Civic Works Committee

May 28, 2018, 12:00 PM

Council Chambers

Members

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

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

5.2 (ADDED) 6th Report of the Cycling Advisory Committee

6. Adjournment

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**NEW 2018 TRAFFIC SIGNALS**

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, he following actions **BE TAKEN** with respect to new traffic signals:

a) The installation of an intersection pedestrian signal on Wellington Road at Bond Street **BE APPROVED**;

b) The installation of a traffic signal at the intersection of Community Gate (PVT) and Fanshawe College Boulevard **BE APPROVED**; and

c) The installation of a traffic signal at the intersection of Southdale Road E and South West Community Centre **BE APPROVED**.

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus areas of **Strengthening Our Community and Building a Sustainable City** by improving traffic flow to ensure the safe and efficient movement of goods, services and people.

BACKGROUND

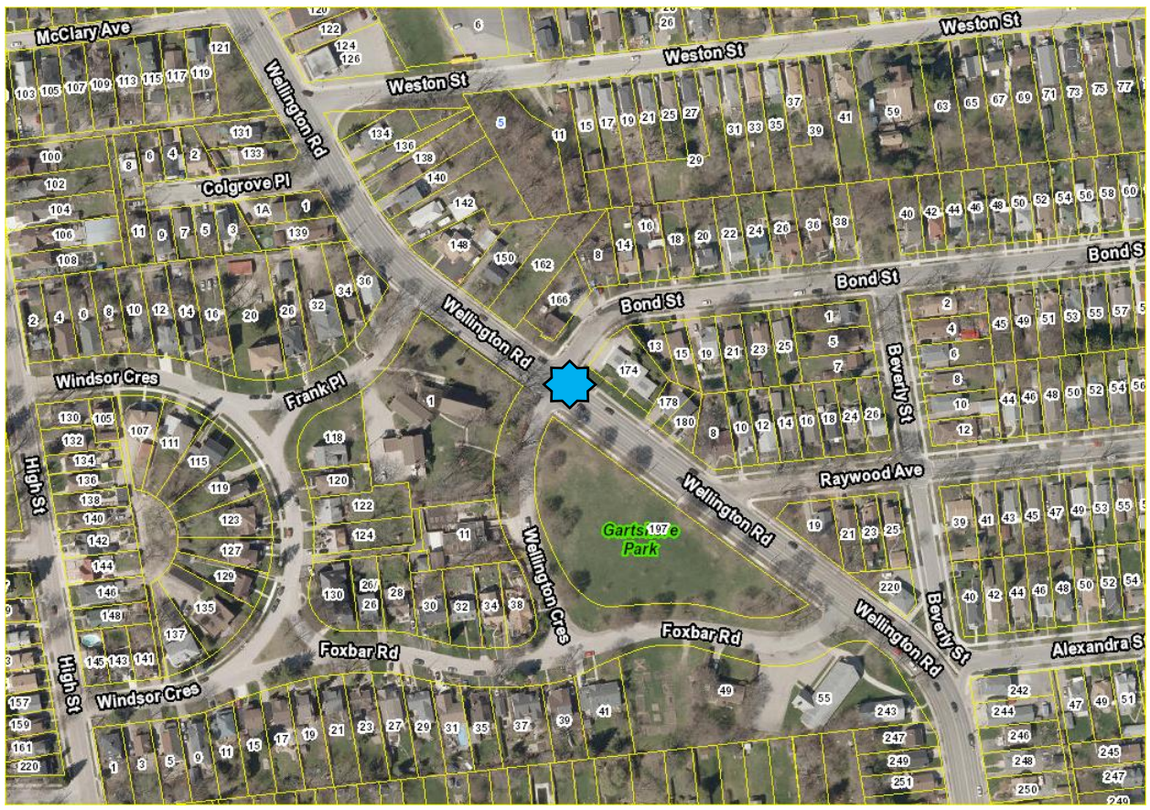
The Roadway Lighting & Traffic Control Division receives numerous requests throughout the year for the installation of Traffic Control Signals. As per Council's policy, this report addresses the signals that are recommended for installation in 2018.

DISCUSSION

Traffic signals are designed to ensure a safe and orderly flow of traffic, provide safety for pedestrians and/or vehicles while crossing a busy intersection and help lessen the severity and frequency of collision between vehicles entering intersections from different directions. However, traffic signals can be detrimental to the operational efficiency of our roadway system and can increase some types of traffic collisions.

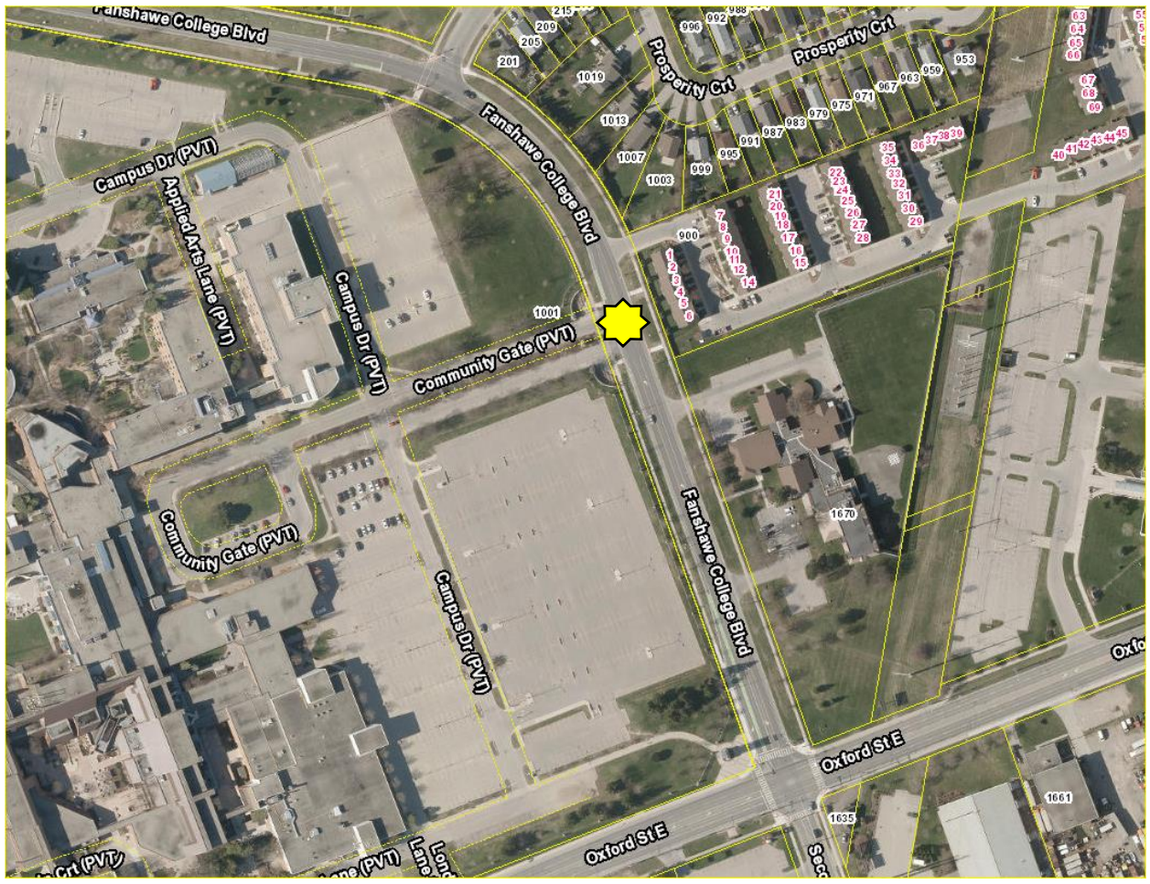
The installation of traffic control signals are recommended at intersections where the traffic/pedestrian volume or collision data indicates that their installation is needed to address operational and/or safety issues. The Ontario Traffic Manual (OTM) specifies the warrant process to be followed by the City of London. This process takes into consideration the volume of traffic/pedestrians using the intersection, the delay experienced by side street traffic/pedestrians and the collision history of the intersection while still acknowledging that traffic control signals can be detrimental to the operational efficiency of our roadway system.

Wellington Road at Bond Street



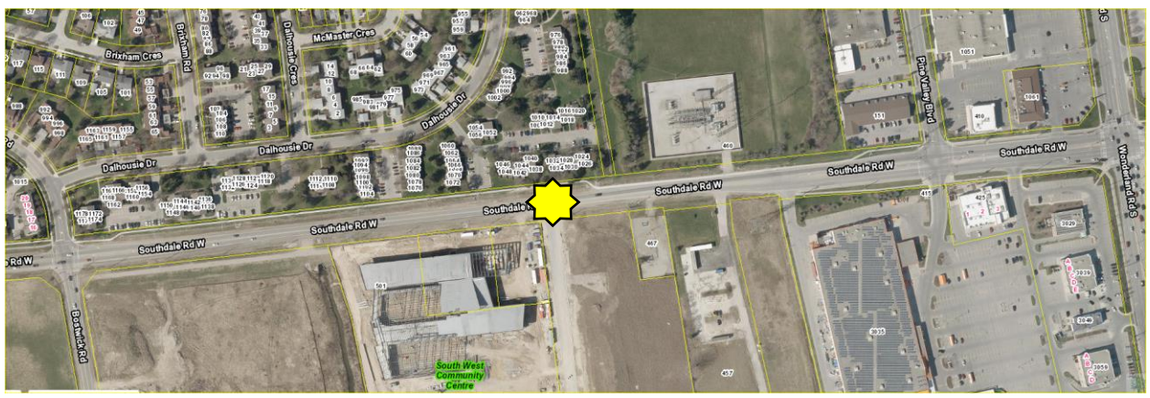
Wellington Road is a four-lane arterial road with an Average Annual Daily Traffic (AADT) of 32,000. Pedestrians who need to cross Wellington Road at this location must walk 450 m either north to Grand Avenue or south to Emery Street. It should be noted that this intersection is a future location of a Bus Rapid Transit station and traffic signal. At this time, the location meets the pedestrian volume warrant but not the traffic volume warrant; therefore, an Intersection Pedestrian Signal (IPS) is recommended to facilitate the pedestrian crossings. The conversion of the intersection to a full traffic signal will be done as part of the Bus Rapid Transit project.

Community Gate (PVT) and Fanshawe College Boulevard



Community Gate (PVT) is the private entrance into Fanshawe College and has an AADT of 7,250. Fanshawe College Boulevard, formerly Second Street, is a Primary Collector road with an AADT of 11,000. A traffic study shows that this intersection satisfies the combined volume and delay OTM warrant; therefore, a traffic signal is recommended to ensure the safe and efficient movement of traffic accessing and leaving Fanshawe College.

Southdale Road W at South West Community Centre



The opening of the South West Community Centre is scheduled to open this September and the Traffic Impact Studied (TIS) identified that a traffic signal was required to facility the movement of vehicles and pedestrians using the site. The Class Environmental Assessment (Class EA) for the widening of Southdale Road W from Colonel Talbot Road to Pine Valley Boulevard is currently underway and construction is scheduled for 2022; however, the timing of this work is subject to the approval of the next

Development Charges Study. It is recommended that a temporary traffic signal be installed at this time until a permanent traffic signal is built as part of the Southdale Road W widening project.

CONCLUSION

The installation of an intersection pedestrian signal on Wellington Road at Bond Street and traffic signals at the intersections of Community Gate (PVT) at Fanshawe College Boulevard and Southdale Road W at South West Community Centre are recommended to address capacity and efficiency concerns.

It should be noted that a report will be submitted later in 2018 outlining the status of other intersections that are being monitored for potential signalization.

PREPARED BY:	REVIEWED & CONCURRED BY:
SHANE MAGUIRE, P. ENG. **DIVISION MANAGER** **ROADWAY LIGHTING & TRAFFIC CONTROL**	**EDWARD SOLDO, P.ENG.** **DIRECTOR, ROADS AND TRANSPORTATION**

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

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May 4, 2018/SM

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**NON-INTRUSIVE VEHICLE DETECTION EQUIPMENT IRREGULAR RESULT**

RECOMMENDATION

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

a) The irregular bid submitted by Fortran Traffic Systems Limited at its tendered price of $450,765.00 (excluding H.S.T.) **BE ACCEPTED** in accordance with the 'Procurement of Goods and Services Policy' Section 8.10 Irregular Result, Clause b and Section 13.2 Clause b;

b) the financing for this project **BE APPROVED** 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 approval given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract for the material to be supplied and the work to be done relating to this project (T18-55); and,

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

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of **Building a Sustainable City** by improving mobility for motorists and cyclists at signalized intersections.

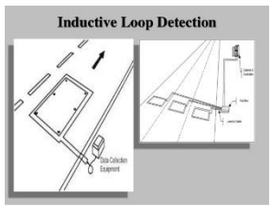
BACKGROUND

There are 359 traffic signals and 39 intersection pedestrian signals (IPS) in the city. Most intersections are semi-actuated which means the signal will remain green on the main street until a vehicle or pedestrian is detected on the side street. Traditionally, induction loops were used to detect when a vehicle is present on the side street. New detection methods have been developed by the industry to address some of the inherent problems with induction loops. The following report reviews some of these detection methods and recommends a plan to improve vehicle detection.

DISCUSSION

The following are the various vehicle detection methods that have been tested in the city:

1. **Induction Loops**



These create an electrical circuit in the road that is interrupted when a vehicle passes over or stops on the loop. The metal content of the vehicle varies and can impact the effectiveness of induction loops. Motorcycles and bicycles may not have enough metal to trigger detection. Induction loops are also susceptible to failure as the pavement deteriorates which results in false detection calls. False detection result in increased red signals on the main street which increases driver frustration. It should also be noted that induction loops cannot be repaired during the winter months.

2. **Video Detection Systems**

Stationary cameras are used to track the movement of vehicles in virtual detection zones. Video detection is not dependent on the metal content of the vehicle; therefore, motorcycle and bicycle detection is improved. That said, video detection can place false calls due to weather issues (e.g. sun glare, dark wet pavement, heavy rain, snow, etc.). It should be noted that video detection systems do not record any images.

3. **LiDAR**

LiDAR uses pulsed lasers to measure the distance between the unit and pavement. A vehicle is detected when the measured distance is less than the calibrated distance. This is relatively new technology for traffic detection and London's experience was not positive primarily due to detection distance limitations. All of London's LiDAR units have been removed.

4. **Magnetometers**

Magnetometer are embedded in the road and use the metal content of vehicle similar to induction loops. This equipment has similar restrictions as induction loops due to the low metal content of motorcycles and bicycles. Repair of magnetometers cannot be done during the winter.

5. **Radar**

Radar units operate similar to video by detecting the travel of vehicles within a virtual zone. Radar is less susceptible to weather interference. Radar also has the added benefit of counting vehicles without any additional equipment. This has been used to increase the number of permanent count stations across the city.

The following table summarizes the above information:

	Induction Loops	Video	LiDAR	Magnetometers	Radar
Motorcycle & Bicycle Detection	○	●	○	○	●
Reliability	○	◖	○	●	●
Weather Impacts	●	○	○	●	●
Maintenance	○	●	●	◗	●
Cost	●	○	◖	◗	○

Scoring: ○ Poor ◖ Better ● Best

Radar vehicle detection is superior to the other forms of detection. Wavetronix radar units have been used on a number of projects and they have been performing well. It is recommended that Wavetronix radar units be the standard for actuated traffic signals. That said, new technology will be reviewed for potential use as it is developed.

EQUIPMENT PROCUREMENT

The tender for the purchase of 25 Wavetronix radar units with four one-year renewals was issued March 28th, 2018 and closed April 27th, 2018. There was only one bid taker and one bid submission. Other Canadian suppliers of this equipment were contacted to ensure they were aware of the tender.

After consultation with the Manager of Purchasing and Supply, the decision was made to open the sole bid. It is recommended that the contract be awarded to Fortran Traffic Systems Limited as an irregular result in accordance with Section 8.10 (b) of the Procurement of Goods and Services Policy. The bid submitted by Fortran Traffic Systems Limited is within the budget for the purchase of Wavetronix Vehicle Detection Systems.

CONCLUSION

A review of the various vehicle detection technologies concluded that radar offers the most reliable detection of all road users given London's climate and the state of the current technologies available. The existing Wavetronixs radar units have been performing well.

In order to realize the financial benefits of large purchases, a tender was issued for the purchase of Wavetronix radar units with four one-year contract renewals. It is recommended that the single bid submitted by Fortran Traffic Systems Limited be accepted; noting that it is within the approved Capital budget. These units will be used on a variety of capital improvement projects and reduce the cost of these projects when compared to purchasing the units on a per project basis.

PREPARED BY:	**REVIEWED & CONCURRED BY:**
SHANE MAGUIRE, P. ENG. **DIVISION MANAGER,** **ROADWAY LIGHTING & TRAFFIC CONTROL**	**EDWARD SOLDO, P.ENG.** **DIRECTOR, ROADS AND TRANSPORTATION**
RECOMMENDED BY:	**RECOMMENDED BY:**
IAN COLLINS, CPA, CMA **DIRECTOR, FINANCIAL SERVICES**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR,** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**

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May 8, 2018/sm

Attn: Appendix A – Source of Financing

cc. Purchasing & Supply Division
Fortran Traffic Systems Limited, 470 Midwest Road, Toronto, ON M1P 4Y5

APPENDIX 'A'

#18084

Chair and Members
Civic Works Committee

May 28,2018
(Award Contract)

RE: Non-Intrusive Vehicle Detection Equipment
(Subledger TF180014)
Capital Project TS406717 - Traffic Signals - Mtce.
Fortran Traffic Systems Limited - $450,765.00 (excluding H.S.T.)

FINANCE & CORPORATE SERVICES REPORT ON THE SOURCE 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 and Engineering Services and City Engineer, the detailed source of financing for this project is:

ESTIMATED EXPENDITURES	**Approved Budget**	**Revised Budget**	**Committed To Date**	**This Submission**		**Balance for Future Work**
Engineering	$600,000	$487,616	$424,984			$62,632
Construction	1,864,743	1,864,743	1,864,743			0
Traffic Signals	994,257	1,106,641	647,943	458,698		0
NET ESTIMATED EXPENDITURES	**$3,459,000**	**$3,459,000**	**$2,937,670**	**$458,698**	**1)**	**$62,632**
SOURCE OF FINANCING:						
Capital Levy	$3,349,000	$3,349,000	$2,937,670	$411,330		$0
Drawdown from Capital Infrastructure Gap Reserve Fund	110,000	110,000		47,368		62,632
TOTAL FINANCING	**$3,459,000**	**$3,459,000**	**$2,937,670**	**$458,698**		**$62,632**

Financial Note:

1)	Contract Price	$450,765
	Add: HST @13%	58,599
	Total Contract Price Including Taxes	509,364
	Less: HST Rebate	50,666
	Net Contract Price	**$458,698**

lp

Jason Davies
Manager of Financial Planning & Policy

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**HAMILTON ROAD AND HIGHBURY AVENUE INTERSECTION IMPROVEMENTS 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 Hamilton Road & Highbury Avenue Intersection Improvements Environmental Assessment:

(a) The Hamilton Road & Highbury Avenue Intersection Improvements Municipal Class Environmental Study Report **BE ACCEPTED**;

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

(c) The Hamilton Road & Highbury Avenue Intersection Improvements Environmental Study Report **BE PLACED** on public record for a 30 day review period; and,

(d) Implementation timing of the improvements for the Hamilton Road & Highbury Avenue Intersection **BE REFERRED** to the 2019 Development Charges Bylaw development.

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 Development Charges Background Study.
- Civic Works Committee – October 6, 2014 – Environmental Assessment Study Appointment of Consulting Engineer
- Civic Works Committee – March 8, 2016 – Hamilton Road & Highbury Avenue Intersection Improvements - Environmental Assessment Update

COUNCIL'S 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 mobility choices for cyclists, transit, automobile users and pedestrians. The environmental assessment identifies the solution to improve operations and safety at this intersection.

DISCUSSION

Purpose

This report provides Committee and Council with an overview of the Hamilton Road & Highbury Avenue Intersection Improvements Municipal Class Environmental Assessment (EA) and seeks approval to finalize the study. The completed Environmental Study Report (ESR) documents the EA process undertaken for the intersection traffic operation improvements.

Background

The need to improve the intersection of Hamilton Road and Highbury Avenue was identified in the City's Smart Moves 2030 Transportation Master Plan (TMP) and it was carried forward into the 2014 update of the City of London's Development Charges Background Study for near-term implementation subject to approvals and funding.

The subject intersection ranks in the top 50 of the most collision-prone intersections in London according to the 2014 Network Screening study. Due to recurring congestion at the intersection, 40% of the collisions within the intersection consist of rear end collisions. Unrestricted turning movements and the lack of access management in close proximity to the intersection contribute to the existing queuing and collision issues.

The current traffic volume on Highbury Avenue south of Hamilton Road is 45,000 vehicles per day, which exceeds its capacity. Traffic volume north of Hamilton Road is approaching capacity. Due to the heavy through and turning traffic volumes during the rush hours, the intersection currently operates at a failing level of service in the afternoon peak hour. With no improvements to the intersection by 2025, conditions on current critical movements are predicted to worsen and the intersection will continue to fail with increased delays of up to 9 minutes and vehicle back-ups of up to 400 metres on some approaches during weekday afternoon rush hour.

Project Description

The Environmental Assessment (EA) for improvements to the Hamilton Road and Highbury Avenue intersection satisfies the requirements of the Municipal Class EA (2000, as amended in 2007 and 2011) as a Schedule 'C' project. Improvements to the intersection are required to address existing and future traffic volumes, intersection safety, access management issues, and pedestrian and cyclist needs.

Dillon Consulting Limited was retained to complete the EA for improvements to the Highbury Avenue North/Hamilton Road intersection. The Study Area for the project is shown on Figure 1.

ENVIRONMENTAL ASSESSMENT SUMMARY

The Environmental Study Report (ESR) documents the process followed to determine the recommended undertaking and the environmentally significant aspects of the planning, design and construction of the proposed intersection improvements. It describes: the problem being addressed, the existing social, natural and cultural environmental considerations, planning and design alternatives that were considered and a description of the recommended alternative. A copy of the Executive Summary for the ESR is contained in Appendix A.

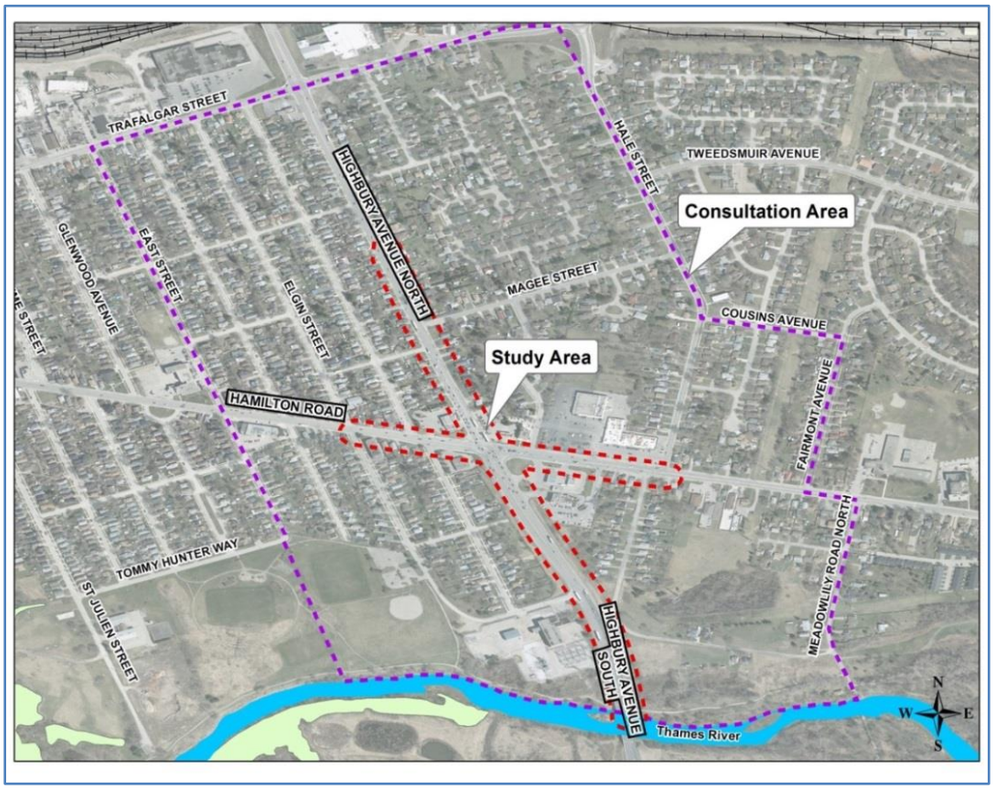


Figure 1: Study Area

Planning and Analysis of Alternatives

Phase 1 of the Municipal Class EA process involved the problem and opportunity statement identification. It was determined that improvements are needed at this Intersection to address existing and future road/traffic operational deficiencies, future transit system efficiencies, road safety, and long-term vision of a street design that improves active transportation.

Phase 2 of the EA process involved review and update to alternative solutions (planning alternatives) to the problem/opportunity. Also as part of Phase 2, options for improving access management at the intersection were identified and evaluated. The significant number of individual access points to residential and commercial uses along Highbury Avenue North and Hamilton Road is a major cause of traffic congestion, back-ups and collisions. To alleviate these issues, potential access management changes considered at the Highbury Avenue North/Hamilton Road include:

- Restricting some access points to right-in/right-out access. Median islands will be used to physically restrict left-turns that cause conflicts with other traffic movements;
- Closing entrances in close proximity to the intersection subject to the availability of other entrances;
- Consolidation of existing entrances.

Phase 3 of the EA process involved the identification of the design options. Opportunities to expand the existing intersection are limited due to the surrounding commercial and residential development and the cost of property acquisitions. Based on the Phases 1 and 2 review and update, four Design Options were developed and evaluated for the Highbury Avenue North/Hamilton Road intersection to address the problems and opportunities identified for the Highbury Avenue North/Hamilton Road intersection.

All options include the following key improvements:

- Median islands on Hamilton Road at the intersection and between Highbury Avenue North and Hale Street;
- Additional southbound through lane;
- Eastbound and westbound bike lanes on Hamilton Road;
- Eastbound left turn lane to No Frills/Fairmont Plaza;
- Westbound left turn lane into McDonald's;
- Raised median and two-way left turn lane between Magee Street and the end of the southbound median island, north of Hamilton Road; and,
- Landscaping and urban design elements.

Design Options 1 to 4 include the following additional improvements:

Design Option 1:

- Additional northbound and southbound through lanes along Highbury Avenue North.

Design Option 2:

- Additional southbound through lane along Highbury Avenue North; and,
- Eastbound channelized right turn lane with receiving lane on Highbury Avenue North.

Design Option 3:

- Additional northbound and southbound through lanes along Highbury Avenue North;
- Eastbound channelized right turn lane with receiving lane on Highbury Avenue North;
- Westbound dual left turn lanes; and,
- Northbound channelized right turn lane.

Design Option 4:

- Additional northbound and southbound through lanes along Highbury Avenue North;
- Westbound dual left turn lanes;
- Northbound dual left turn lanes; and,
- Northbound channelized right turn lane.

Comparative Evaluation of Design Options

A comparative evaluation of Design Options 1 to 4 was completed to determine the preferred option. Reflecting existing and future conditions potentially affected by the options, the evaluation factors covered transportation planning and operations, road design, construction, land uses/socio-economic environment and relative costs. For this project, the most important evaluation criteria are future level of service, especially future overall intersection delays, residential and commercial property impacts and total cost.

Based on the comparative evaluation, Design Option 3 was selected as the preferred option. Design Option 3 improves overall future intersection traffic operations while balancing impacts on the surrounding residential and commercial properties.

Benefits of Design Option 3

A list of benefits resulting from intersection improvements are shown below:

Traffic Operation

- The recommended improvements significantly improve traffic operations at the intersection for the future (2025) afternoon peak hour.
- Bus bays will be provided to reduce traffic delays relating to transit stops.
- The new centre curbed median on Hamilton Road will reduce access to some side streets, thereby reducing neighbourhood traffic infiltration and cut-through traffic.
- Access management changes will alleviate traffic congestion and reduce back-ups, reduce fuel consumption and improve road safety.

Landscape and Urban Design

- Landscaped median treatments on Highbury Avenue North and Hamilton Road;
- The recommended improvements provide opportunities to provide landscaping and urban design elements, including a parkette north of the Esso Station on the west side of Highbury Avenue North.
- The recommended median on Hamilton Road west of Highbury Avenue is compatible with the Streetscape Master Plan for Hamilton Road.

Active Transportation

- The planned bike lanes on Hamilton Road will improve cyclist safety.
- The use of urban “smart channels” replacing the existing right-turn channels will improve drivers’ visibility of pedestrians.

The preferred design for intersection improvements is shown on Figure 2 below and the cross-sections of the proposed roadway improvements are shown on Figures 3 to 6 below.

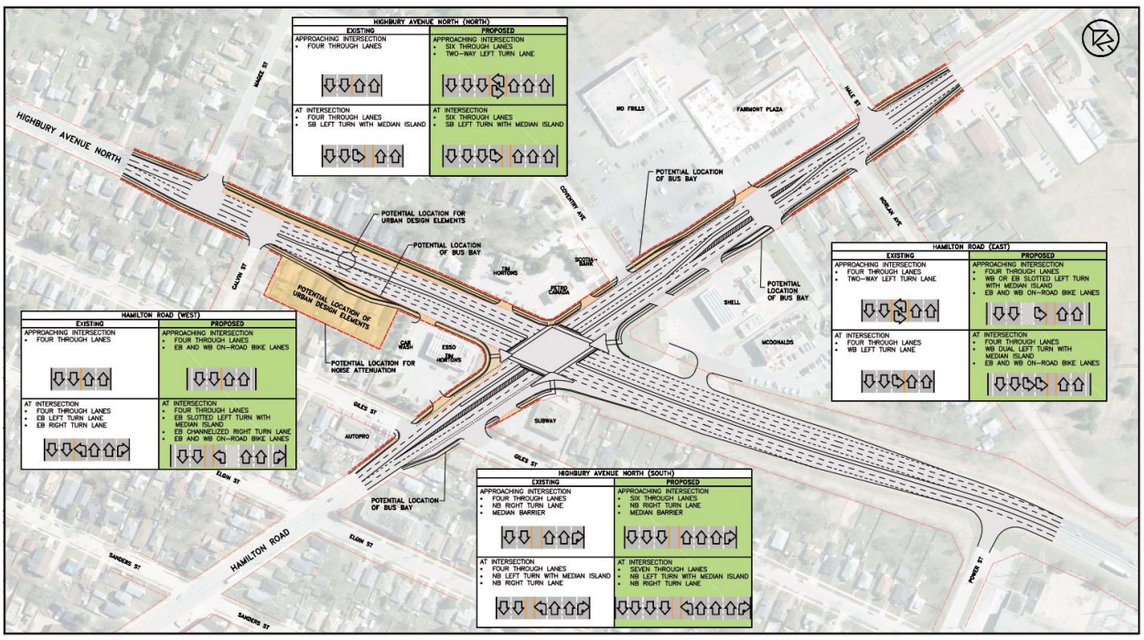


Figure 2: Preferred Design for Intersection Improvements

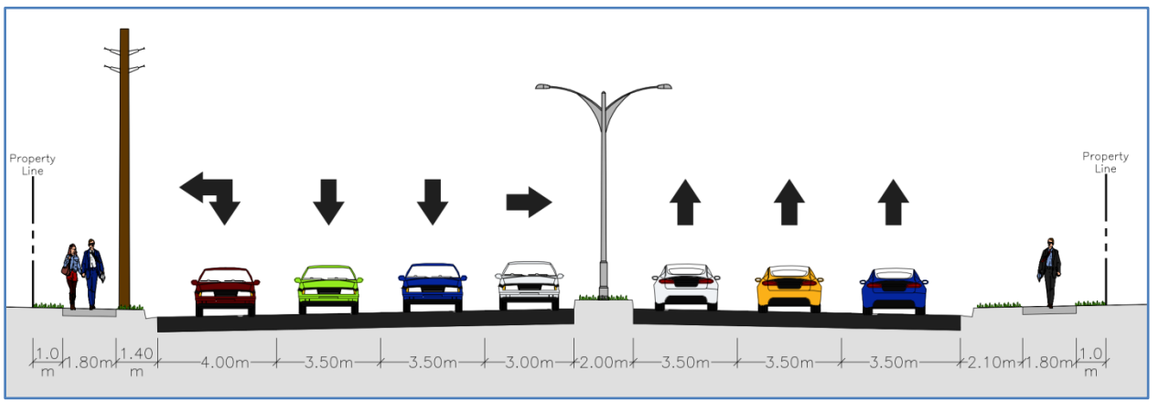


Figure 3: Preferred Design, Highbury Avenue Cross-Section - North of Hamilton Road

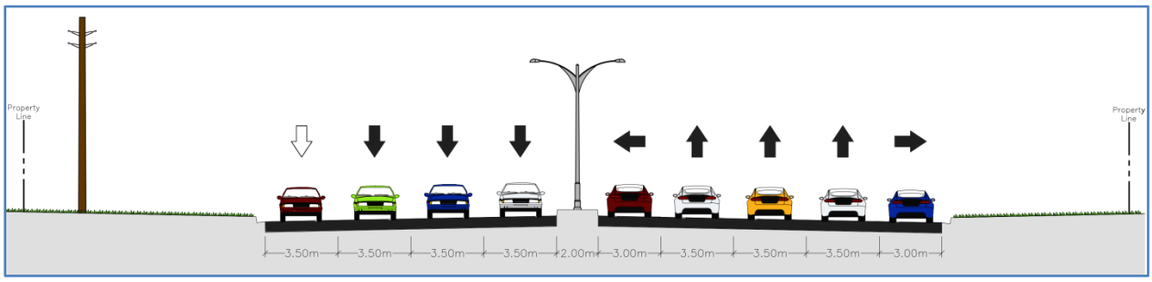


Figure 4: Preferred Design, Highbury Avenue Cross-Section - South of Hamilton Road

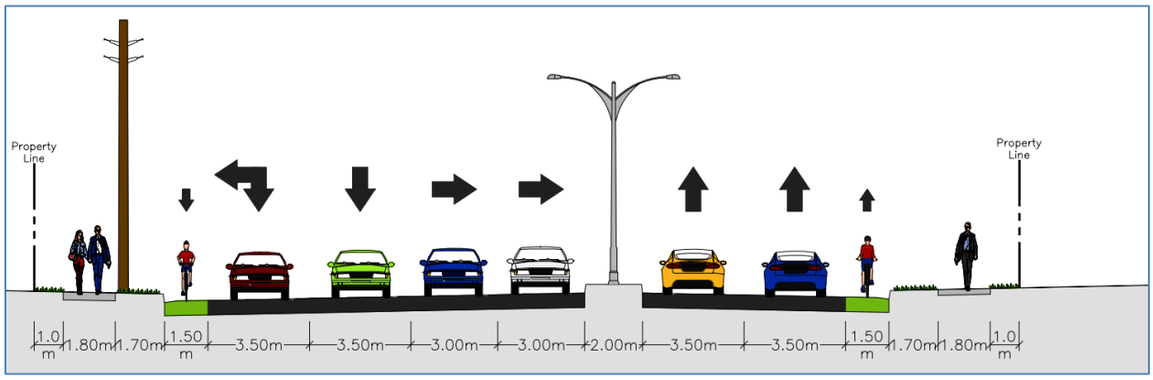


Figure 5: Preferred Design, Hamilton Road Cross-Section - East of Highbury Avenue

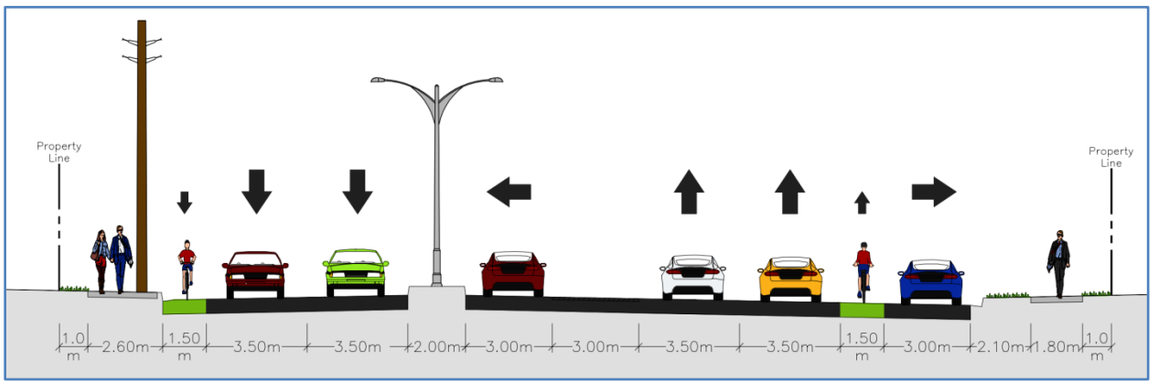


Figure 6: Preferred Design, Hamilton Road Cross-Section- West of Highbury Avenue

Property Impacts

The existing right-of-way widths in the project limits are relatively narrow with most ranging from 20 to 30 m in width. This presents a need for extensive property acquisition. The preferred design will have property acquisition requirements from almost all residential and commercial properties within the project limits. The majority of the acquisitions are limited to strip widenings. Partial land acquisition is required from 33 residential and 9 commercial properties. Significant property requirements at eight

residential properties on the west side of Highbury Avenue will result in the removal of these houses. Figure 7 below shows the property required for the preferred design.

The property owners have been made aware of this need and staff will continue to consult with impacted property owners to discuss and negotiate compensation for property impacts as a result of the proposed plan.

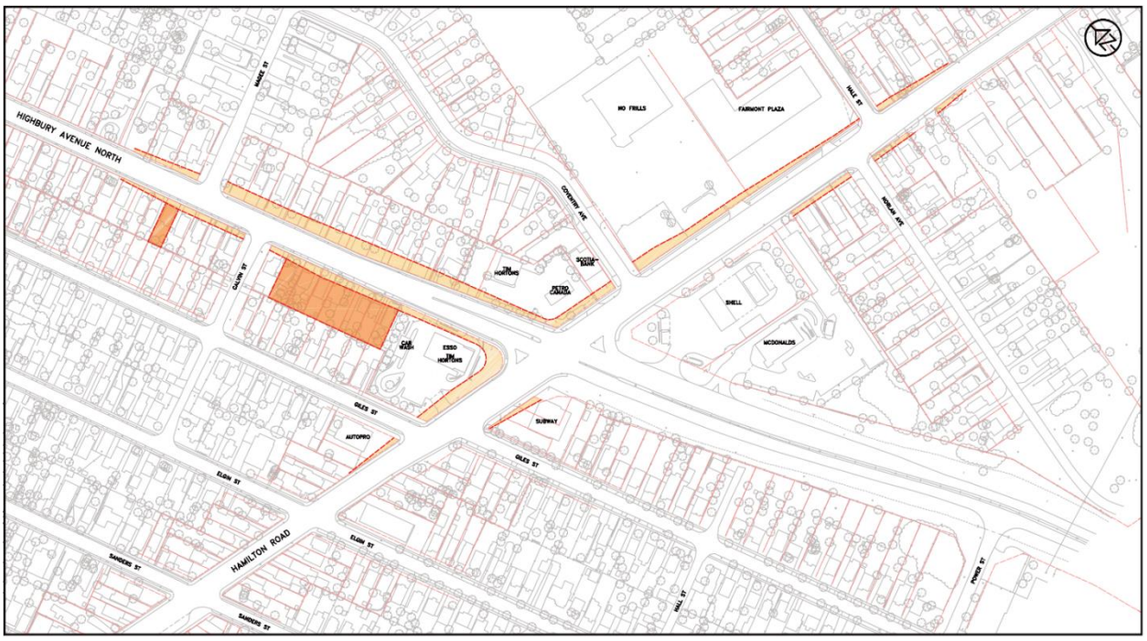


Figure 7: Property Required for the Preferred Design

CONSULTATION

A Notice of Study Commencement for the project was issued in January 2015. The City received a total of 143 completed comment forms, with 45 residents providing comments. Comments, questions and concerns included property and access impacts, timing and duration of construction, pedestrian and cyclist safety, high traffic volumes and the speed of traffic on Highbury Avenue North, cut-through traffic and high traffic speeds on side streets, including Giles, Hale, Elgin and Magee Streets and poor air quality caused by idling vehicles. High collision rates at the intersection were also noted as a concern.

Public Information Centre (PIC) 1 was held on May 14th 2015, at the Fairmont United Church. The purpose of PIC 1 was to obtain public and agency input on existing engineering and environmental conditions, the Problem/Opportunity Statement and alternative design solutions for the intersection improvements. A total of 32 local residents attended the PIC, along with a representative of the Upper Thames River Conservation Authority.

PIC 2 was held on March 9th 2016, at the BMO Centre. The purpose of the second PIC was to present the alternative designs developed for the intersection improvements, comparative evaluation of the alternatives and the preferred design. Design Option 3 was identified as the preferred design. A total of 36 individuals signed the record of attendance, including the Ward 1 Councillor and a representative of the Middlesex-London Health Unit.

Major businesses affected by the access management changes were also contacted to discuss the proposed changes. Meetings have been held with representatives of the Petro-Canada, Esso and Shell stations located at the intersection. Other businesses within the study area were contacted but have not responded to requests for a meeting.

Consultation with First Nations

The Ministry of the Environment and Climate Change (MOECC) provided information and resources to assist with First Nations consultation. A checklist provided by MOECC was completed indicating that there are no First Nations rights affected by the intersection improvements. The Notice of Study Commencement, along with a comment form, was mailed to the First Nations on the Contact List by a City letter dated January 23, 2015. One First Nation replied to the letter. The Chippewas of the Thames Consultation Coordinator commented that the project was screened and no concerns were identified.

On April 10, 2015, representatives of the City of London met with the Caldwell First Nation Chief and two councillors to provide an overview of on-going Class EA projects in the city, including the Highbury Avenue North/Hamilton Road intersection improvements. No concerns were expressed regarding the proposed improvements at the Highbury Avenue North/Hamilton Road intersection.
First Nations were also advised of the Public Information Centres (PIC) held for the project by City of London letters. A letter dated April 27, 2015, was sent to First Nations on the Contact List for PIC 1 while a letter dated February 22, 2016, advised First Nations of PIC 2.

Following PIC 1, the Ministry of Aboriginal Affairs (MAA) requested to be removed from the mailing list. The MAA advised that the Oneida Nation of the Thames, Chippewas of the Thames First Nation and Munsee-Delaware First Nation could have an interest in the project. All three had previously been contacted as described above were already included on the project Contact List.

Meetings with Residential Property Owners

Prior to the notices being issued for PIC 2, residential property owners potentially affected by the full acquisition of their properties for the road improvements received a City of London letter dated February 3, 2016. The letter requested that the property owner contact the City to arrange a meeting to discuss property impacts. Meetings and conference calls were subsequently held with many of the affected property owners on February 19, 2016. The results of these meetings were generally positive. The City will continue to discuss and negotiate with affected property owners throughout the design phase of the project.

FINANCIAL IMPLICATIONS AND IMPLEMENTATION

A preliminary cost estimate summary for the Hamilton Road and Highbury Avenue intersection improvements is illustrated below. The costs include roadway construction, traffic signals & illumination, storm sewers, sanitary sewers, watermains, utility relocation, property acquisition and miscellaneous costs.

Item	Estimated Cost ($)
Intersection Improvements Investments	
Road works and Earthworks	2,714,000
Storm Sewers and Appurtenances	495,000
Traffic Signals and Illumination	750,000
Miscellaneous	205,000
Utility Relocations	700,000
Sub-total	**4,864,000**
Contingency (15%)	729,600
Engineering and Consulting (15%)	729,600
Property Acquisition	4,157,900
TOTAL PRELIMINARY COST ESTIMATE	**10,481,100**
Coordinated Lifecycle Renewal Investments	
Sanitary Sewers and Appurtenances	436,300
Watermains and Appurtenances	597,400
Sub-total	**1,033,700**
Contingency (15%)	155,055
Engineering and Consulting (15%)	155,055
TOTAL PRELIMINARY COST ESTIMATE	**1,343,810**

The initial 2014 DC estimates were based on a very preliminary review of the intersection and major improvements and property impacts were not anticipated when the budget for the intersection was allocated in the 2014 Development Charges Background Study. A budget of $2,315,000 for the project was identified in the 2014 Development Charges Background Study for implementation in 2019. After more thorough analysis and scoping through the EA process, the transportation improvements are estimated at $10,500,000. Lifecycle renewal investments in sanitary sewer and watermain to be coordinated with the project for cost-effectiveness are valued at an additional $1,300,000.

Implementation

The recommended solution identifies the need for extensive property acquisition. In order to acquire the numerous parcels of land in an approach that is responsive to property owners and cost-effective for the City, a rescheduling of the project implementation is necessary. The upcoming 2019 Development Charges Bylaw process provides an opportunity to incorporate the new project schedule and costs estimates into the capital programs.

CONCLUSION

The provincial Environmental Assessment Act requires the completion of an EA for projects of this scope. A Municipal Class EA was undertaken for the improvements of Hamilton Road and Highbury Avenue intersection. An ESR has been completed and is ready for final public review. The EA was prepared with input from external agencies, utilities, emergency service providers, and other stakeholders, as well as First Nations and property owners in proximity to the study area.

Based on a comparative evaluation, the design option that was selected improves overall future intersection traffic operations while minimizing impacts on the surrounding residential and commercial properties, compared to the other options.

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 time period. Should the public and stakeholders feel that issues have not been adequately addressed, they may provide written notification within the 30-day review period to the Minister of the Environment and Climate Change requesting further consideration.

The intersection improvement as identified in the EA requires an adjustment to the project schedule and cost in the 2019 Development Charges Bylaw review currently underway. The implementation of the project is proposed to be considered in the formulation of the upcoming 2019 Development Charges Bylaw. This will consider a longer-term project schedule for cost-effective and amicable property acquisition along with the updated project cost estimate.

Acknowledgements

This report was prepared with assistance from Maged Elmadhoon, Traffic & Transportation Engineer in the Transportation Planning & Design Division.

PREPARED BY:	**REVIEWED AND CONCURRED BY:**
DOUG MACRAE, P. ENG. **DIVISION MANAGER** **TRANSPORTATION PLANNING & DESIGN**	**EDWARD SOLDO, P. ENG.** **DIRECTOR, ROADS AND TRANSPORTATION**
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC **MANAGING DIRECTOR** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**	

Attach: Appendix A: Environmental Study Report Executive Summary

cc: Brian Huston, P.Eng., Dillon Consulting Limited

Appendix A

Environmental Study Report Executive Summary

Executive Summary

Introduction

The City of London retained Dillon Consulting Limited to complete an Environmental Assessment (EA) Study for improvements to the Highbury Avenue North/Hamilton Road intersection following the requirements of the *Municipal Class EA* (2000, as amended in 2007 and 2011) for a Schedule 'C' project. Building on the recommendations of the City's *2030 Smart Moves Transportation Master Plan (TMP)*, the EA Study assessed the need for additional through and turning lanes at the intersection, improvements to the median on Hamilton Road and pedestrian and cyclist friendly design features.

The study followed Phases 1 to 4 of the Class EA process. Phases 1 and 2 of the process were covered by the City's TMP and reviewed and updated as part of this Class EA.

Phase 1 Review and Update, Problem/Opportunity Identification

The following Problem/Opportunity Statement was developed as part of the review and update of Phase 1 of the Class EA process. The statement is based on an overview of planning, engineering and environmental conditions potentially affected by the proposed intersection improvements.

Improvements to the intersection are required to address:

- Existing Traffic Volumes (2013 data projected to 2015, using 1.5% annual growth rate):
  - Heavy northbound and southbound straight through traffic volumes, northbound and westbound left turn volumes and eastbound right-turn volumes during morning/afternoon rush hours
  - The intersection currently operates at Level of Service (LOS) 'D' in the morning (AM) peak hour and LOS 'F' in the afternoon (PM) peak hour
- Future Traffic Volumes (projected to 2025):
  - Up to 2.5 minutes of delay and 270 metres of vehicle back-ups during weekday morning rush hour
  - More than 9 minutes of delay and up to 390 metres of vehicle back-ups during weekday afternoon rush hour
  - By 2025, with no improvements, the intersection is expected to operate at LOS 'E' in the morning (AM) peak hour and LOS 'F' in the afternoon (PM) peak hour

- Intersection Safety:
  - According to the City of London's 2014 Network Screening, the intersection ranks in the top 50 most collision-prone intersections in London. Between 2010 and 2014 there were:
    - 110 reported collisions with 40% consisting of rear end collisions
    - 24 reported collisions along Highbury Avenue North between Hamilton Road and Calvin Street, with 67% consisting of rear end collisions
- Access Management Issues:
  - Commercial and residential entrances in close proximity to the intersection contribute to the existing queuing and collision issues

- Pedestrian and cyclist needs.

Phase 2 Review and Update, Alternative Solutions

The *2030 Smart Moves Transportation Master Plan* recommended that the Highbury Avenue North/Hamilton Road intersection be improved within 10 years. As part of the Phase 2 review and update, the intersection improvements recommended by the Master Plan were refined. The following work was completed for Phase 2:

- Overview of existing planning, engineering and environmental conditions potentially affected by improvements to the intersection
- The "Do Nothing" alternative (maintaining the intersection "as is" with no improvements) was dismissed from further consideration since it does not address existing and future capacity, queuing and collision issues, access management issues and pedestrian and cyclist needs
- Options were identified and evaluated for improving access management at the intersection. Preferred access management options incorporated into the Design Options included restricting some access points to right-in/right-out access using medians to physically restrict left-turn movements and closing or consolidating entrances close to the intersection
- Alternative design components were evaluated to address issues associated with the major traffic movements at the intersection. Examples of the components developed include increase green time for traffic signals, increase capacity by adding straight-through lanes, provide separate or longer turn lanes and increase the storage length for turns. The most effective components were carried forward and incorporated into the Design Options developed for the intersection improvements.

Phase 3, Design Options

Design Options

Opportunities to expand the existing intersection are limited due to the surrounding commercial and residential development and the cost of property acquisitions. Based on the Phases 1 and 2 review and update, four Design Options were developed and evaluated. In addition to the preferred access management changes, all options included the following improvements:

- Median islands on Hamilton Road
- Additional southbound through lane
- Eastbound and westbound bike lanes on Hamilton Road
- Designated eastbound left turn with median island to No Frills/Fairmont Plaza
- Designated westbound left turn with median island into McDonald's
- Raised median and two-way left turn lane between Magee Street and the end of the southbound median island, north of Hamilton Road
- Bus bays to minimize interference with traffic
- Bicycle lanes on Hamilton Road to separate vehicular traffic and slower moving bicycles.

In addition to these improvements, Design Options 1 to 4 included the following improvements:

- Design Option 1 – Additional northbound and southbound through lanes along Highbury Avenue North

- Design Option 2 – Additional southbound through lane and eastbound channelized right turn lane
- Design Option 3 – Additional northbound and southbound through lanes, eastbound channelized right turn, westbound dual left turn (requires an eastbound slotted left) and northbound channelized right turn lane
- Design Option 4 – Additional northbound and southbound through lanes, westbound dual left turn (requires an eastbound slotted left), northbound dual left turn (requires a southbound slotted left) and northbound channelized right turn lane.

The lane configuration of the four Design Options developed for the intersection improvements, along with the existing layout, are summarized in **Table ES1**.

Table ES1: Lane Configuration of Design Options

	Existing	Option 1	Option 2	Option 3	Option 4
Hamilton Road Eastbound					
Through lanes	2	2	2	2	2
Left turn lane	Single*	Single	Single	Single	Single
Right turn lane	Yes	Yes	Yes**	Yes**	Yes
Bike lanes	No	Yes	Yes	Yes	Yes
Hamilton Road Westbound					
Through lanes	2	2	2	2	2
Left turn lane	Single*	Single	Single	Dual	Dual
Right turn lane	No	No	No	No	No
Bike lanes	No	Yes	Yes	Yes	Yes
Highbury Avenue North Northbound					
Through lanes	2	3	2	3	3
Left turn lane	Single	Single	Single	Single	Dual
Right turn lane	Yes**	Yes**	Yes**	Yes**	Yes**
Bike lanes	No	No	No	No	No
Highbury Avenue North Southbound					
Through lanes	2	3	3	3	3
Left turn lane	Single	Single	Single	Single	Single
Right turn lane	No**	No**	No**	No**	No**
Bike lanes	No	No	No	No	No

*No curbed median present

**With channelized island.

Comparative Evaluation of Design Options

A comparative evaluation of Design Options 1 to 4 was completed to determine the preferred option. Reflecting existing and future conditions potentially affected by the options, the evaluation factors covered transportation planning and operations, road design, construction, land uses/socio-economic environment and relative costs. For this project, the most important evaluation criteria are future Level of Service, especially future overall intersection delays, residential and commercial property impacts and total cost.

Based on the comparative evaluation, Design Option 3 was selected as the preferred option. In summary, the results of the comparative evaluation showed that:

- Design Options 1 and 2 do not provide a significant improvement to the overall average delays to traffic
- With the exception of the southbound movement and the northbound through movement, Design Option 3 improves vehicle delays for all movements
- Although Design Option 4 results in the highest reduction in vehicle delays, it has more significant property impacts than Design Option 3
- All design options have significant impacts on the residential properties at the intersection
    - Design Options 1, 2 and 3 remove eight houses, while Design Option 4 removes 11 houses
    - All options require minor property acquisitions from almost all of the residential and commercial properties within the project limits
- Design Option 2 has the fewest impacts on the Esso/Tim Horton's site, while Design Option 1 and 3 cause moderate impacts on the site. Design Option 4 has significant impacts on the site and would likely require an internal reconfiguration of the site or acquisition of the property.

Design Option 3 improves overall future intersection traffic operations while minimizing impacts on the surrounding residential and commercial properties, compared to the other options. In total, eight houses are removed and property is required from 33 residential and nine commercial properties, for a total of 50 properties impacted.

Public and Agency Consultation

A Notice of Study Commencement for the project was issued in January 2015. The City received a total of 143 completed comment forms, with 45 residents providing comments. Comments, questions and concerns included property and access impacts, timing and duration of construction, pedestrian and cyclist safety, high traffic volumes and the speed of traffic on Highbury Avenue North, cut-through traffic and high traffic speeds on side streets, including Giles, Hale, Elgin and Magee Streets and poor air quality caused by idling vehicles. High collision rates at the intersection were also noted as a concern.

Residents also suggested several improvements, including bus bays, access and parking restrictions on side streets, improved access management to local streets and businesses, advanced green lights and turning lanes at the intersection and redirecting truck traffic to Veterans Memorial Parkway. The improvements should also consider traffic impacts on nearby intersections, such as the Hamilton Road/Hale Street intersection and Trafalgar Street/Highbury Avenue North intersection.

Public Information Centre (PIC) 1 was held on May 14, 2015, at the Fairmont United Church. The purpose of PIC 1 was to obtain public and agency input on existing engineering and

environmental conditions, the Problem/Opportunity Statement and alternative design solutions for the intersection improvements. A total of 32 local residents attended the PIC, along with a representative of the Upper Thames River Conservation Authority.

In general, most of the PIC 1 attendees agreed that intersection improvements are required to relieve traffic congestion, improve traffic, pedestrian and cyclist safety and reduce traffic cutting through local neighbourhoods to avoid the intersection. Concerns were similar to those received in response to the Notice of Study Commencement. Sixteen written submissions were received following the PIC. Residents made many suggestions for improvements, similar to those made in response to the Notice of Study Commencement.

PIC 2 was held on March 9, 2016, at the BMO Centre. The purpose of the second PIC was to present the alternative designs developed for the intersection improvements, comparative evaluation of the alternatives and the preferred design. Design Option 3 was identified as the preferred design. A total of 36 individuals signed the Record of Attendance, including the Ward 1 Councillor and a representative of the Middlesex-London Health Unit.

Most of the PIC attendees agreed with the proposed intersection improvements and the selection of Design Option 3 as the preferred design. Concerns included impacts on the houses along Highbury Avenue North, pedestrian and cyclist safety, traffic safety, including the speed of traffic and visibility problems at the intersection and the difficulty of making left turns onto Giles and Elgin Streets.

Major businesses affected by the access management changes were also contacted to discuss the proposed changes. Meetings have been held with representatives of the Petro-Canada, Esso and Shell stations located at the intersection. To date, no other businesses have responded to Dillon's requests for a meeting.

Preferred Design

In summary, Design Option 3 was chosen as the preferred design because it provides a balance between improvements in overall traffic operations, property impacts and cost. As shown on **Figures ES1** to **ES6**, the preferred design includes additional northbound and southbound through lanes, an eastbound channelized right turn, a westbound dual left turn (requires an eastbound slotted left) and a northbound channelized right turn lane. Other design features include:

- Turning restrictions and closures for some residential and commercial entrances (access management changes)
- Median islands on Hamilton Road east of the intersection to Hale Street and west of the intersection to Giles Street
- Eastbound and westbound bike lanes on Hamilton Road
- Eastbound left turn lane into No Frills/Fairmont Plaza and westbound left turn lane into McDonald's
- Centered two-way left turn lane on Highbury Avenue North between Magee Street and the end of the southbound median island, north of the intersection.

Bus bays and provisions for landscaped areas have also been incorporated into the preferred design.

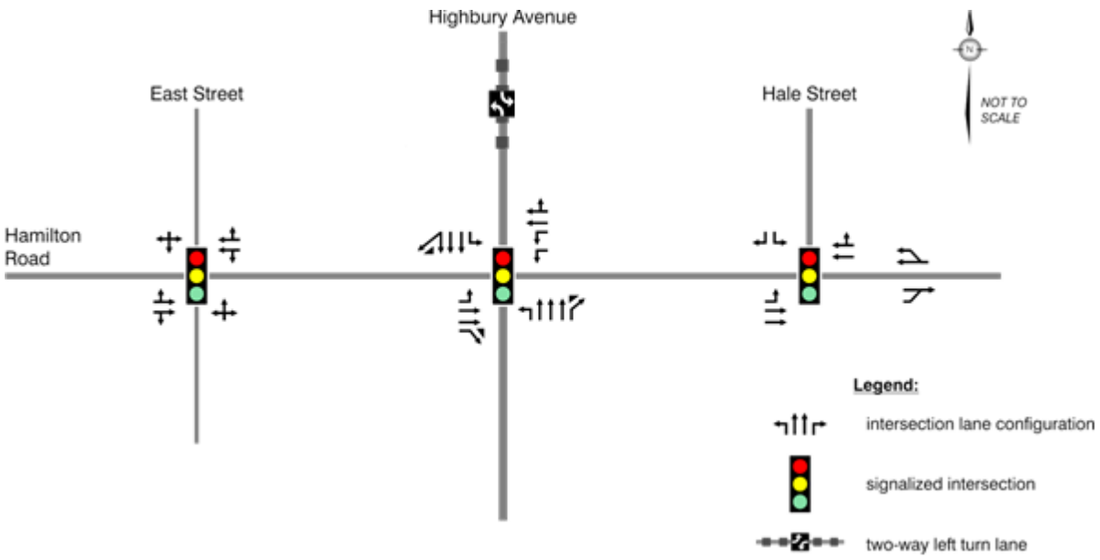


Figure ES2: Preferred Design, Lane Configuration and Traffic Control Measures

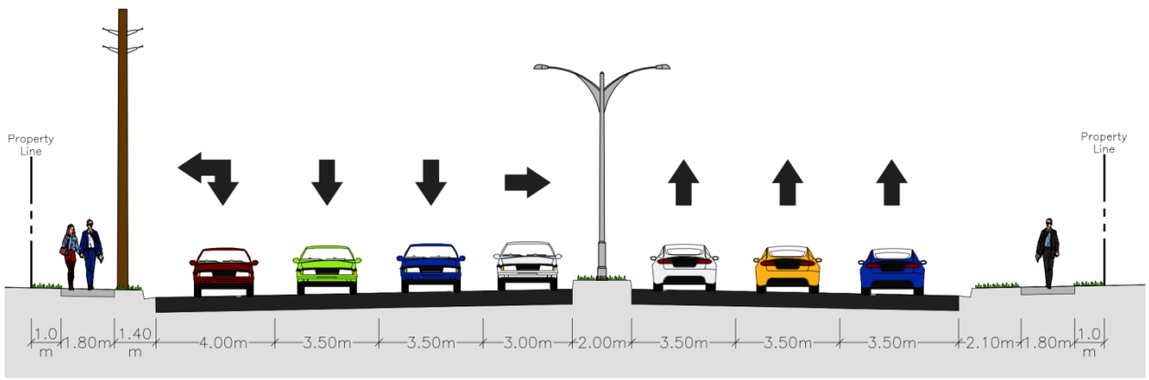


Figure ES3: Preferred Design, Highbury Avenue North Cross-Section, North of Hamilton Road

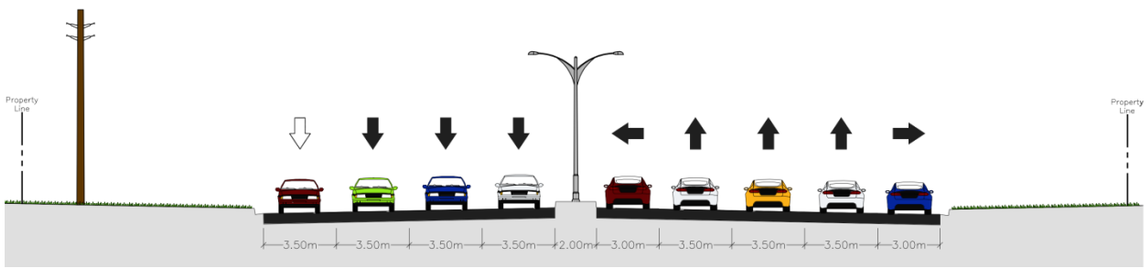


Figure ES4: Preferred Design, Highbury Avenue North Cross-Section, South of Hamilton Road

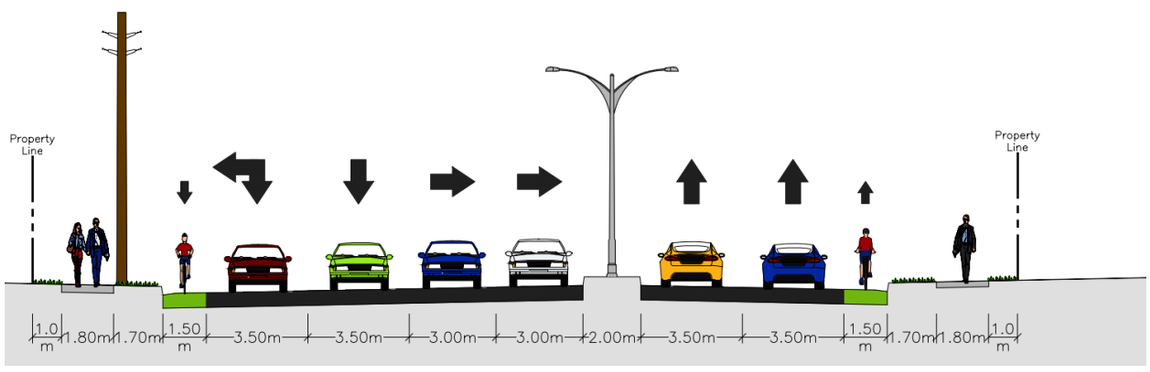


Figure ES5: Preferred Design, Hamilton Road Cross-Section, East of Highbury Avenue North

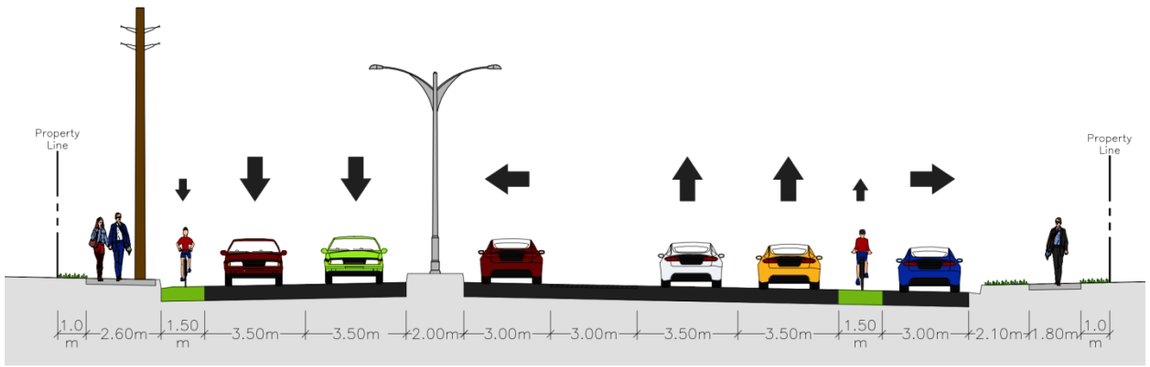
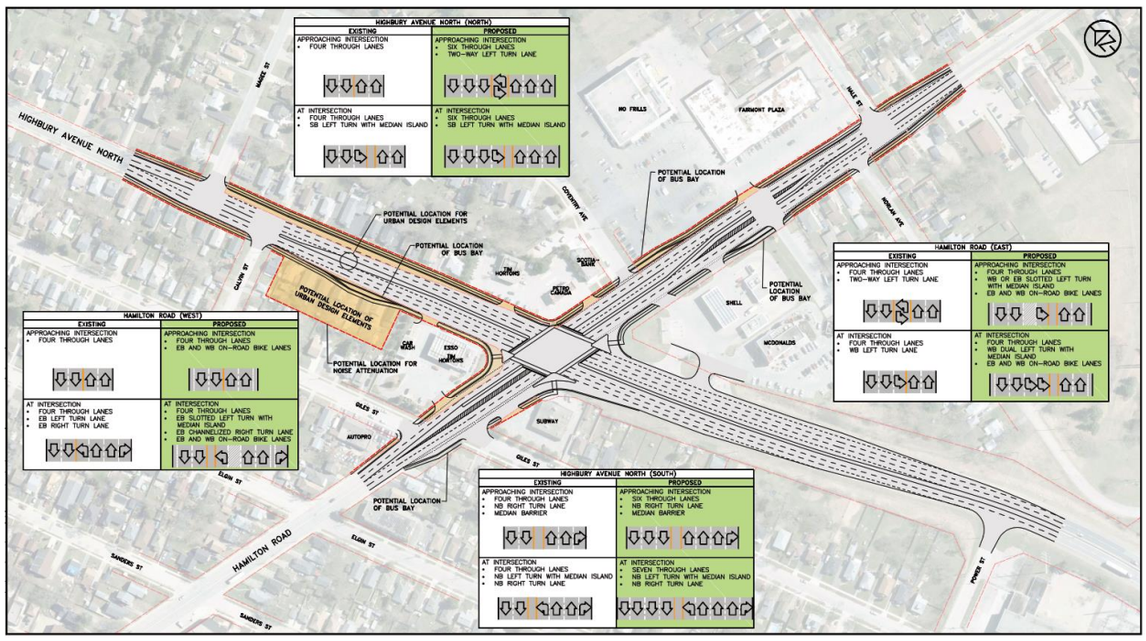


Figure ES6: Preferred Design, Hamilton Road Cross-Section, West of Highbury Avenue North



Construction Timing and Traffic Management during Construction

The proposed schedule for intersection improvements is under review considering the identified scope and property acquisition requirements. Utility relocations, property acquisitions and tree clearing will be completed prior to construction.

During construction:

- Temporary lane reductions will be required on Highbury Avenue Road North and Hamilton Road
- Access to residential properties and businesses will be maintained
- Temporary traffic signals will be in operation at the intersection.

Preliminary Construction Cost Estimate

As shown in **Table ES2**, the preliminary construction cost estimate for the proposed intersection improvements, including the City's share of utility relocations, is $11.82 million.

Table ES2: Preliminary Construction Cost Estimate

Item	Estimated Cost
Intersection Improvements Investments	
Roadworks and Earthworks	$ 2,714,000
Storm Sewers and Appurtenances	$ 495,000
Traffic Signals and Illumination	$ 750,000
Miscellaneous	$ 205,000
Utility Relocations	$ 700,000
Sub-total	**$ 4,864,000**
Contingency (15%)	$ 729,600
Engineering and Consulting (15%)	$ 729,600
Property Acquisition	$ 4,157,900
TOTAL INTERSECTION IMPROVEMENTS	**$ 10,481,100**
Lifecycle Renewal Investments	
Sanitary Sewers and Appurtenances	$ 436,300
Watermains and Appurtenances	$ 597,400
Sub-total	**$ 1,033,700**
Contingency (15%)	$ 155,055
Engineering and Consulting (15%)	$ 155,055
TOTAL LIFECYCLE RENEWAL	**$ 1,343,810**
TOTAL PRELIMINARY COST ESTIMATE	**$ 11,824,910**

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MONDAY MAY 28th, 2018**
FROM:	**GEORGE KOTSIFAS, P.ENG. MANAGING DIRECTOR DEVELOPMENT AND COMPLIANCE SERVICES AND CHIEF BUILDING OFFICIAL**
SUBJECT:	**PAY BY APP FOR PARKING UPDATE**

RECOMMENDATION

That, on the recommendation of the Managing Director, Development and Compliance Services and Chief Building Official the following report **BE RECEIVED** for information.

2015-19 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus areas of leading in public service – create, explore and implement new technology improvements to assist in management of corporate assets.

BACKGROUND

PURPOSE

In May 2017, an app to pay for parking in London was launched with a Canadian vendor Honk Mobile. This report is to provide an update on the experience in London over the past year.

The app allow residents and visitors in London the option of using a credit card or PayPal to pay for parking at a single space meter, master meter or City of London parking lots which include over 3000 parking spaces. The technology interfaces with the Parking Service Officers handhelds to confirm that the license plate is paid eliminating the need to feed the meter or display a receipt.

The chart below indicates the number of parking tickets issued for parking tickets parked beyond time paid. There has been a 16% decline in tickets issued for this violation when comparing September 2016 to April 2017 vs September 2017 to April 2018. The app notifies the user 10 minutes prior to the parking session ending and the decline in tickets may be in part due to the ability for the Honk user to extend their parking duration remotely by phone, thereby, eliminating the risk of receiving a parking ticket.

	September 2016 to April 2017	**September 2017 to April 2018**	**Impact**
# of parking tickets issued for parking beyond time paid	17,012	14,230	-2,782
Parking Ticket Revenue	$502,905	$419,910	($82,995)

The revenue comparison below indicates an increase in meter fees after Honk Mobile was launched. This may be due, in part, to the ability for the user to increase the length of the parking session midway and/or the ability to use a credit card or PayPal to make a higher payment (e.g. customer only had $0.75 in change on hand but with Honk the user decided to pay more).

The number of complaints received regarding the app has been minimal and less than anticipated. The vast majority of those were user error. For example, the wrong plate was entered or the person left their vehicle prior to starting the app. There were a few where the payment information did not get relayed to the enforcement technology for several minutes and tickets were issued, however, they could readily be dealt by our customer service staff as it was evident the person had paid for parking using Honk. This rarely occurred and did not cause any significant issues.

	September 2016 to March 2017	September 2017 to March 2018	Impact
Parking Meter Fees (on-street & parking lots)	$1,540,500	$1,940,300	+399,800
Monthly Parking Permits	$61,500	$60,000	-1,500
Total Parking Meter Fees less Monthly Permits	$1,479,000	$1,880,300	+398,300
Honk Revenue	0	$200,200	0

September 2017 to March 2018	
Total Meter Revenue Incl. Honk	$1,880,300
Total Honk Revenue	$200,200
% of Meter Revenue Collected using Honk Mobile	10.65%

FINANCIAL IMPACT

As stated above, there was a decrease in the number of parking tickets issued for this violation, however, it is not possible to know that this is 100% contributable to Honk Mobile. The fees for meter revenue have increased during the same timeframe by 26% which could indicate that this is in part due to Honk Mobile and/or an increase in voluntary compliance. What is known is the Parking Services' actual revenue received has increased over the previous period even with a decline in meter parking tickets.

A definitive cost saving measure is a decrease in receipt paper stock printed at the parking meters as well as rolling paper to process coins, as there were almost 74,000 transactions completed using the Honk Mobile app. An individual parking receipt is 3.75 inches in length, therefore, a total of 23,125 feet of paper was conserved equalling over 7 km during the time frame of May 2017 to April 2018 with a cost saving of over $1000. Another benefit is a reduction in littering as we often see the paper receipts discarded on sidewalks and roads. Additionally the paper to roll the coins for processing was also reduced. Further statistics below indicate the usage and revenues relating specifically to Honk.

City of London - On Street	May 1 2017- Apr 1 2018
Convenience fees	$12,294.25
Processing Fees	$5,179.30
# of transactions	52,757
Total Revenue	$98,572.75

City of London Off Street Lots	May 1 2017- Apr 1 2018
Convenience fees	$4,814.25
Processing Fees	$3,864.97
# of Transactions	20,776
Total Revenue	$101,625.75

	Unique Users	Average # Transactions Per User
City of London - Lots	4,743	4
City of London - On Street	9,208	6
Combined	13,951	5.3

The City is divided into zones. Each parking lot is a separate zone and on-street parking is broken down by area, however, the motorist can move around and park on-street using the same transaction. A user can pay for 2 hours on any street and move their vehicle on street (does not apply to parking lots). The app has the ability to determine where vehicles are parking and for how long. The majority of the feedback to both office and on street enforcement personnel, has been extremely positive with highlights noted below:

- the app is very user friendly
- a great new tool to pay for parking conveniently
- provides receipts for work purposes
- notifies the motorist that their time is ending
- allows businesses the ability to pay for parking for customers
- less frustration on the part of the customer to find parking
- no digging through pockets, purse or ashtray for coins and risking a ticket
- no more lining up in inclement weather at a master meter
- the app is able to be utilized in many other Ontario Cities
  - Oshawa, Whitby, Waterloo, Kingston, Grand Bend/Lambton Shores, Wasaga Beach, Niagara Falls, Gananoque, Welland, St. Catharines
- "I haven't had a parking ticket since I started using this app"

The vendor actively engages social media to promote the parking app and works with our Business Improvement Areas to engage the businesses. A campaign in the Old East BIA area will be undertaken in conjunction with the two parking lot rehabilitations this spring/summer.

CONCLUSION

There are benefits to both the customer and the City and we consider the past year to be successful. We will continue to educate the motoring public of the benefits of the app and monitor the effect on our resources and budget.

Acknowledgements

This report was prepared by Annette Drost, Manager of Municipal Law Enforcement Services with assistance by staff in Parking Services and Financial Services.

PREPARED BY:	**RECOMMENDED BY:**
ANNETTE DROST **MANAGER, MUNICIPAL LAW ENFORCEMENT SERVICES - PARKING AND LICENSING** **DEVELOPMENT AND COMPLIANCE SERVICES**	**O. KATOLYK** **CHIEF MUNICIPAL LAW ENFORCEMENT OFFICER**
RECOMMENDED BY:	
GEORGE KOTSIFAS, P. ENG. **MANAGING DIRECTOR, DEVELOPMENT & COMPLIANCE SERVICES AND CHIEF BUILDING OFFICIAL**	

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**AMENDMENTS TO THE TRAFFIC AND PARKING BY-LAW**

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the attached proposed by-laws (Appendices A & B) **BE INTRODUCED** at the Municipal Council meeting to be held on June 12, 2018 for the purpose of amending the Traffic and Parking By-law (PS-113).

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. **Dundas Place**

   The reconstruction of Dundas Street from Ridout Street to Wellington Street started April 10th, 2018 and it is scheduled to be completed in the Fall of 2019. Dundas Street from Ridout Street to Richmond Street is currently closed. It is recommended that the LTC stops between Richmond Street and Wellington Street be temporarily changed to on-street parking and loading zones until construction on this phase begins. These changes will add 10 parking spots to help offset those lost due to construction.

   A further review was undertaken in the vicinity of Dundas Street to mitigate the loss of parking while still balancing the need for business loading zones. The recommended changes on Carling Street will create five interim parking spots and two additional parking spots on Talbot Street.

   Appendix 'B' contains the Traffic & Parking By-law amendment to reinstate the Bus Stop on Carling Street effective September 1st, 2018 when scheduled bus service resumes.

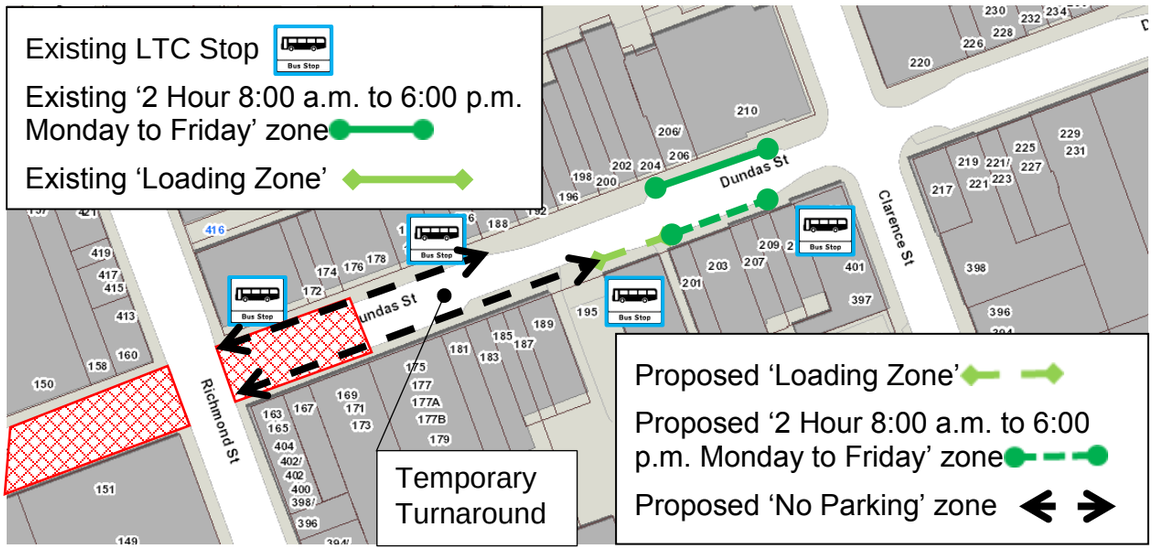


Figure 1: Dundas Street –Richmond Street to Clarence Street Existing and Proposed Interim Changes

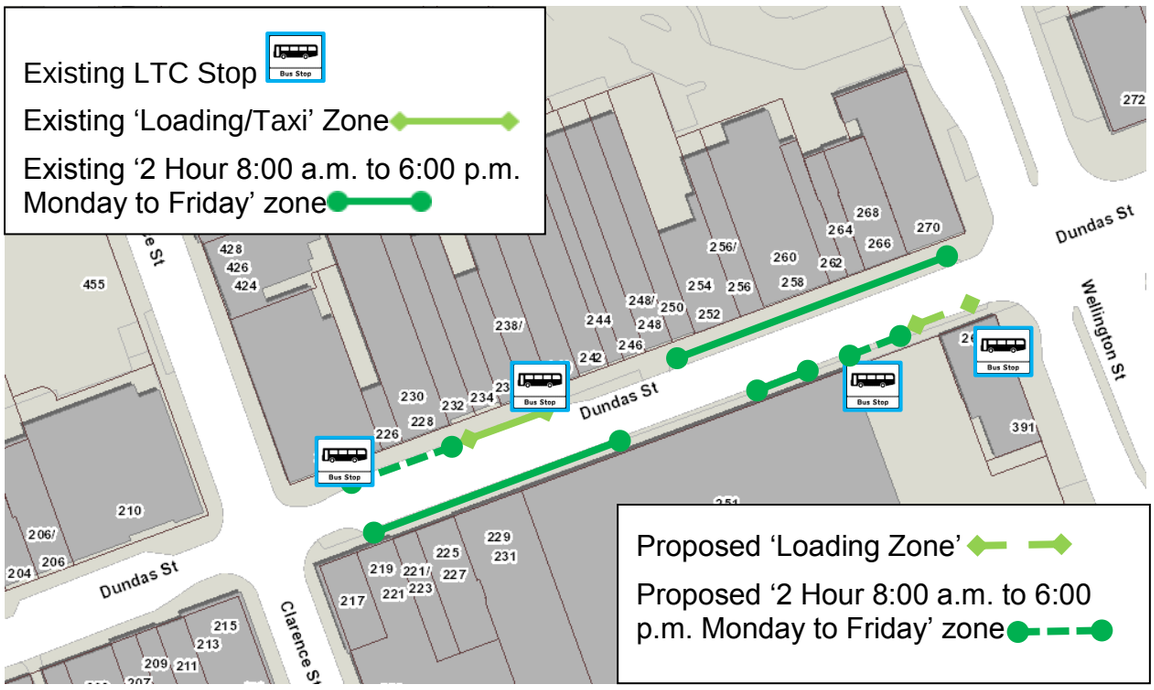


Figure 2: Dundas Street – Clarence Street to Wellington Street Existing and Proposed Interim Changes

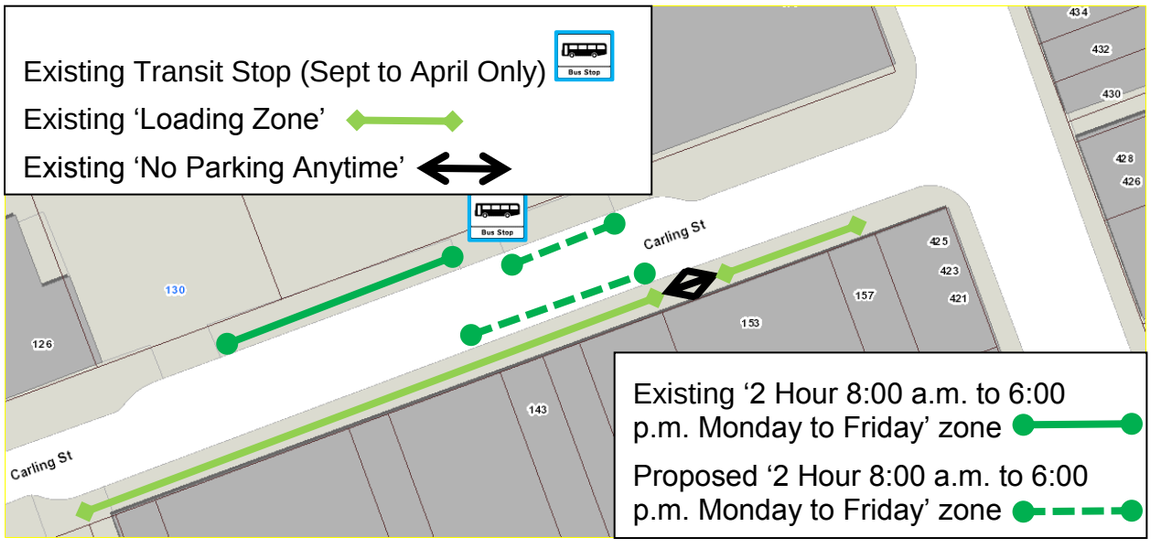


Figure 3: Carling Street – Talbot Street to Richmond Street Existing and Proposed Interim Changes

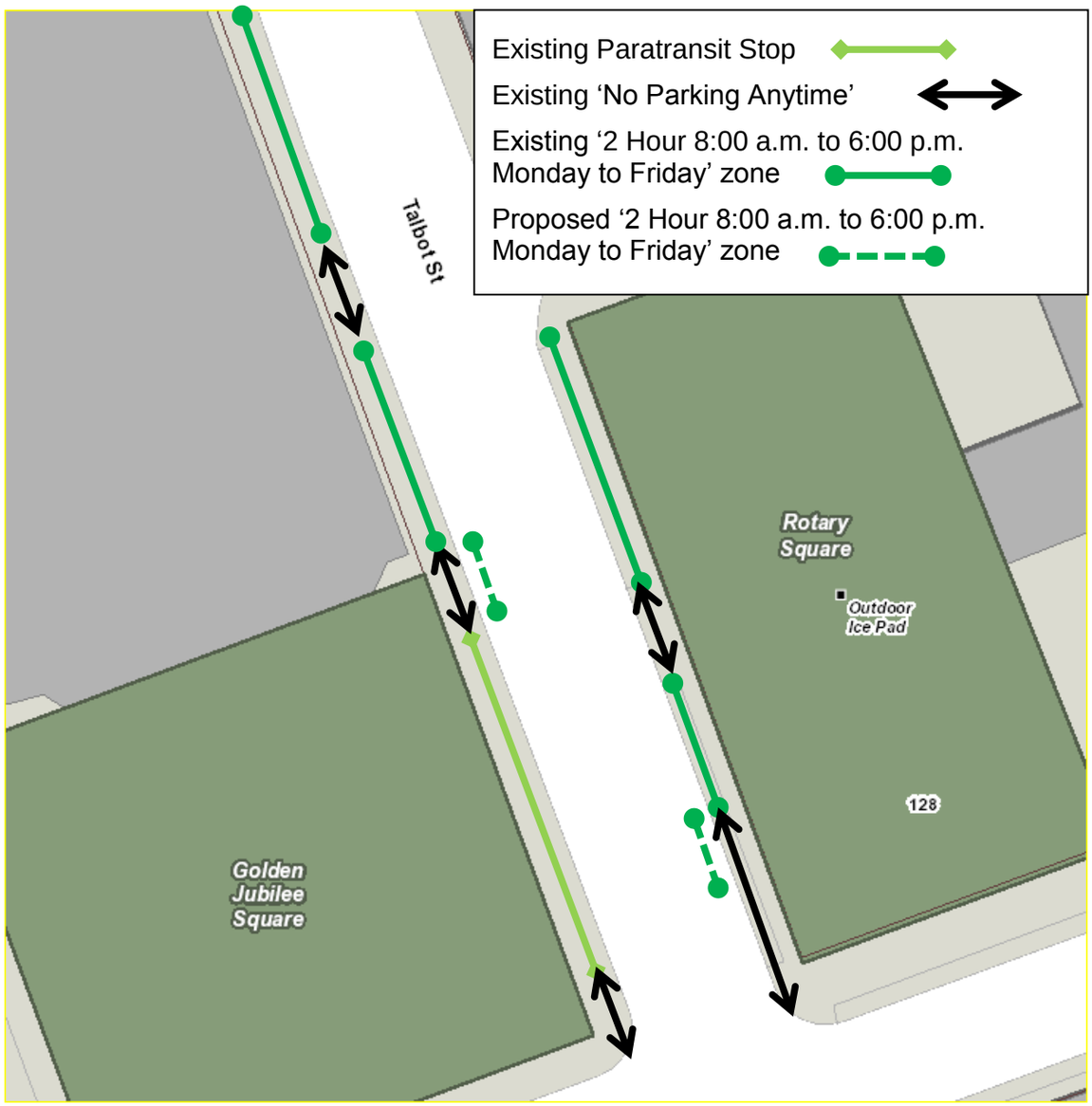


Figure 4: Talbot Street – King Street to Covent Market Lane Existing and Proposed Changes

An amendment is required to Schedule 1 (No Stopping), Schedule 2 (No Parking), Schedule 3 (Prohibited Parking at Bus Stops) and Schedule 5 (Loading Zones) for the above changes.

Lord Roberts French Immersion Public School

Staff received a request from the Thames Valley District School Board and Lord Roberts French Immersion Public School to review the on-street parking conditions on Maitland Street due to safety concerns raised during school drop-off and pick-up times. Currently the East side of Maitland Street from Princess Avenue to Central Avenue is '2 Hour 8:00 a.m. to 6:00 p.m. Monday to Saturday' limited parking zone and the west side a 'No Parking Anytime' zone and 'Loading Zone'. This promotes drivers to park on the east side of the street causing children to cross to the west side of the street creating potential safety concerns. It is recommended to relocate the existing '2 Hour 8:00 a.m. to 6:00 p.m. Monday to Saturday' limited parking zone from the east side of Maitland to the west side and relocate the existing 'No Parking Anytime' zone from the west side of Maitland Street to the east side. It should be noted the school and school board identified that the 'Loading Zone' is no longer required on Maitland Street as school busses now load and unload on Princess Avenue.

Lord Roberts French Immersion Public School

Figure 5: Maitland Street from Princess Avenue to Central Avenue

An amendment is required to Schedule 2 (No Parking), Schedule 5 (Prohibited Parking at Loading Zones, and Schedule 6 (Limited Parking) for the above changes.

3. School Zone Speed Limits

It recommended that the speed limit be reduced to 40 km/h at the following locations as per the School Zone Speed Limit Policy approved by Council:

Centre for Lifelong Learning St. Patrick Campus

King Street	Ashland Avenue to a point 55 m east of Oakland Avenue

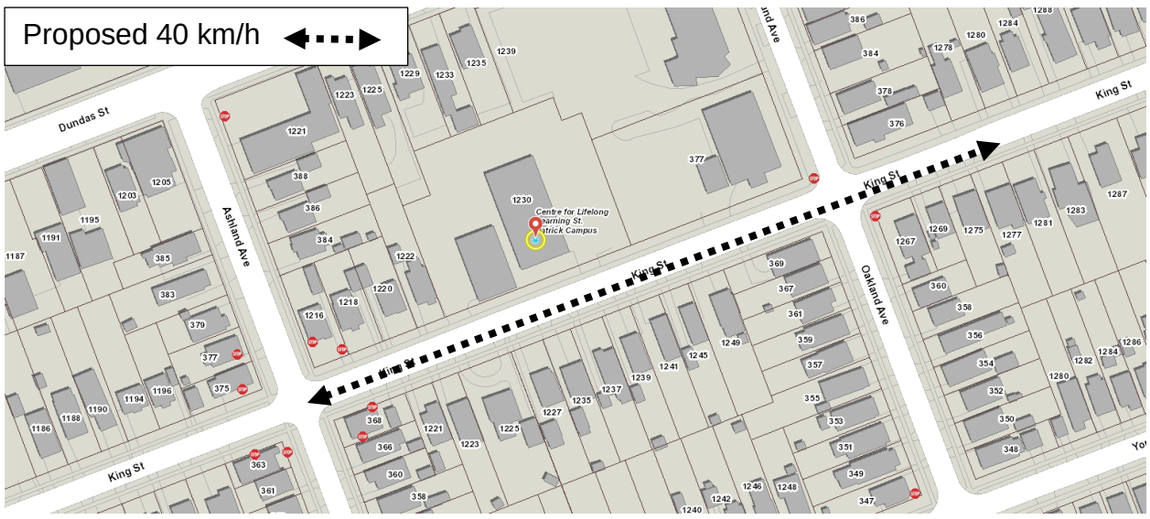


Figure 6: Centre for Lifelong Learning St. Patrick Campus

Gibbons Park Montessori School

Victoria Street	West limit of Victoria Street to a point 46 m west of Northdale Street

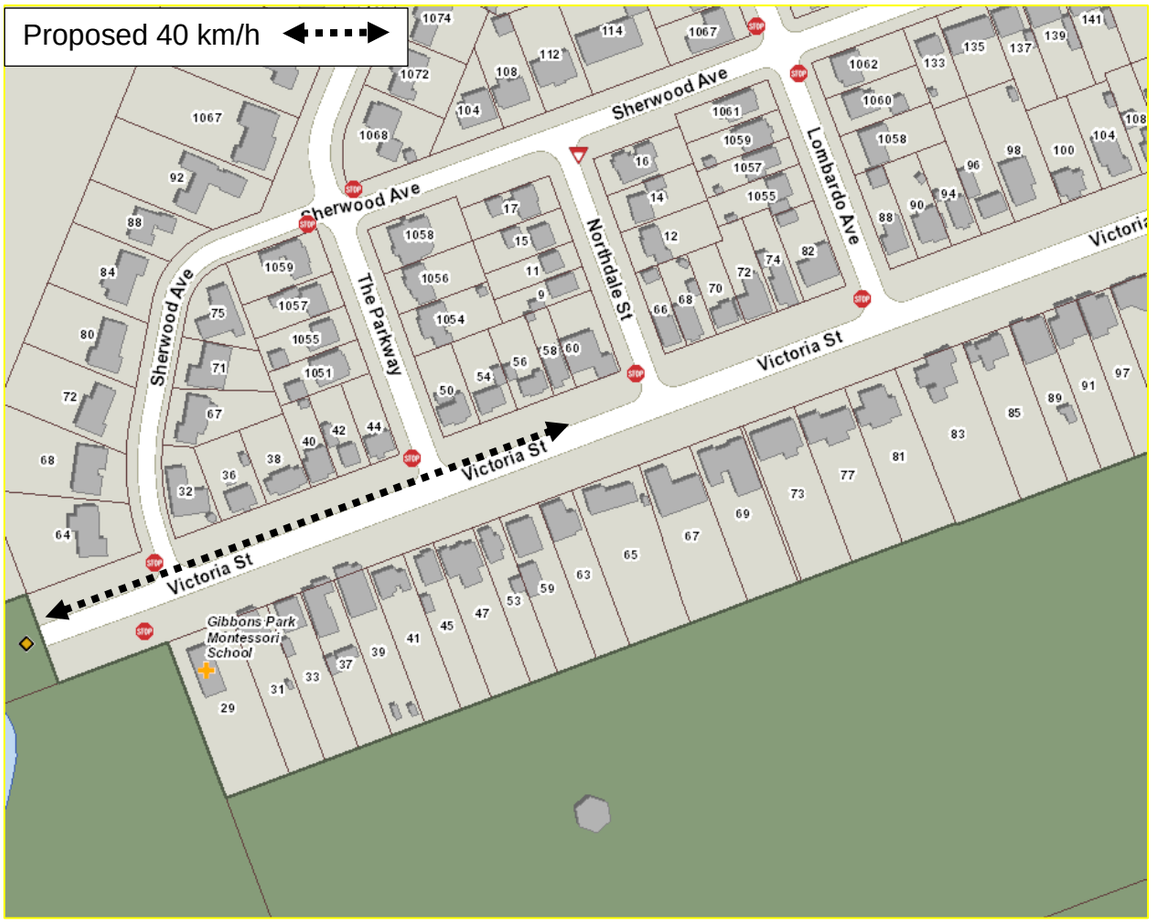


Figure 7: Gibbons Park Montessori School

London Christian Academy

Charles Street Mount Pleasant Avenue to Wharncliffe Road N

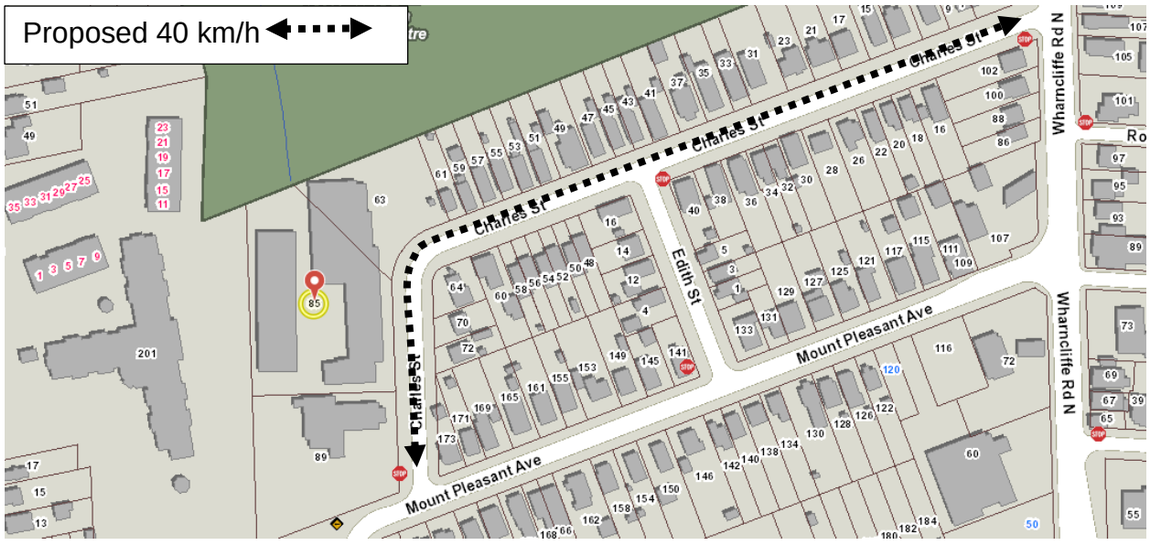


Figure 8: London Christian Academy

Notre Dame Catholic School and Riverside Public School

Biscay Road	Sherene Terrace to a point 225 m west and north of Sherene Terrace
Cramston Crescent	Adevon Avenue to Valetta Street
Oak Park Drive	Kelly Street to Valetta Street
Pinetree Drive	Oban Crescent to the north limit of Pinetree Drive
Sherene Terrace	Valetta Street to Biscay Road
Valetta Street	Oak Park Drive to Sherene Terrace

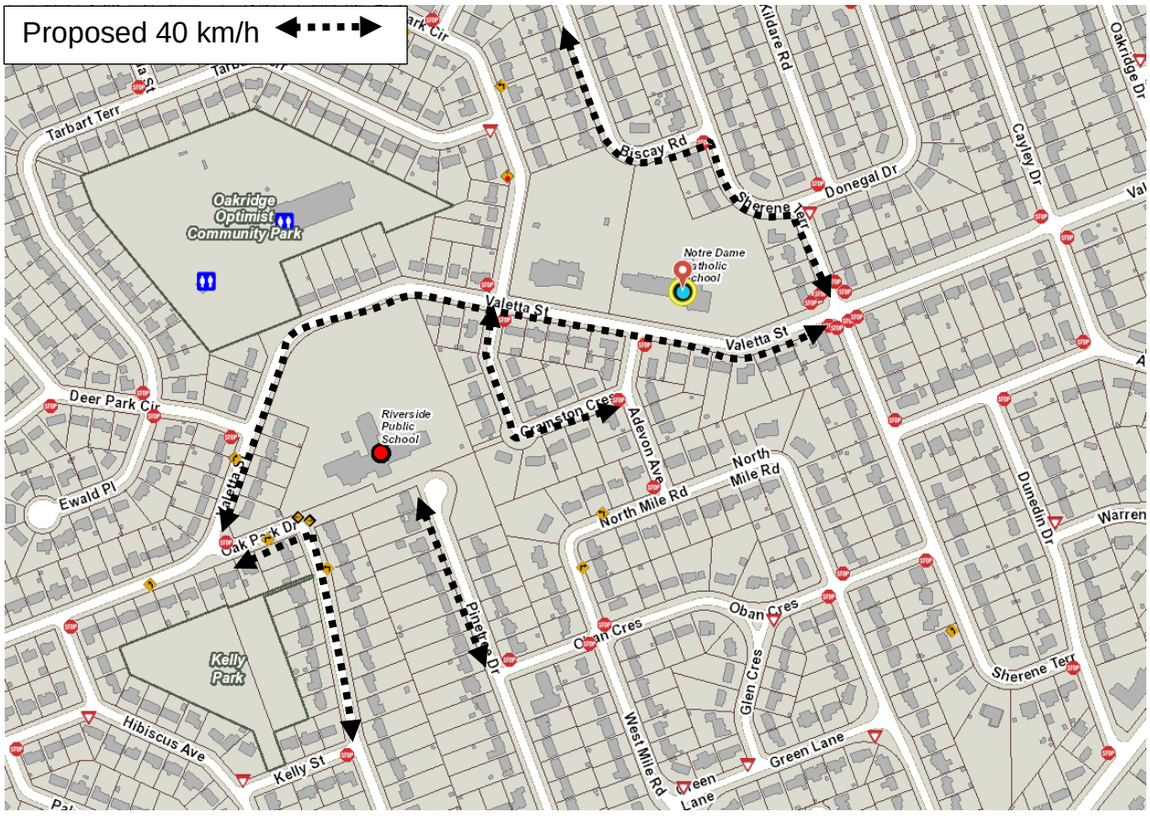


Figure 9: Notre Dame Catholic School and Riverside Public School

West Oaks – French Immersion Public School and Oakridge Secondary School

Quinton Road	Quinton Road (east leg) to Quinton Road (south leg)

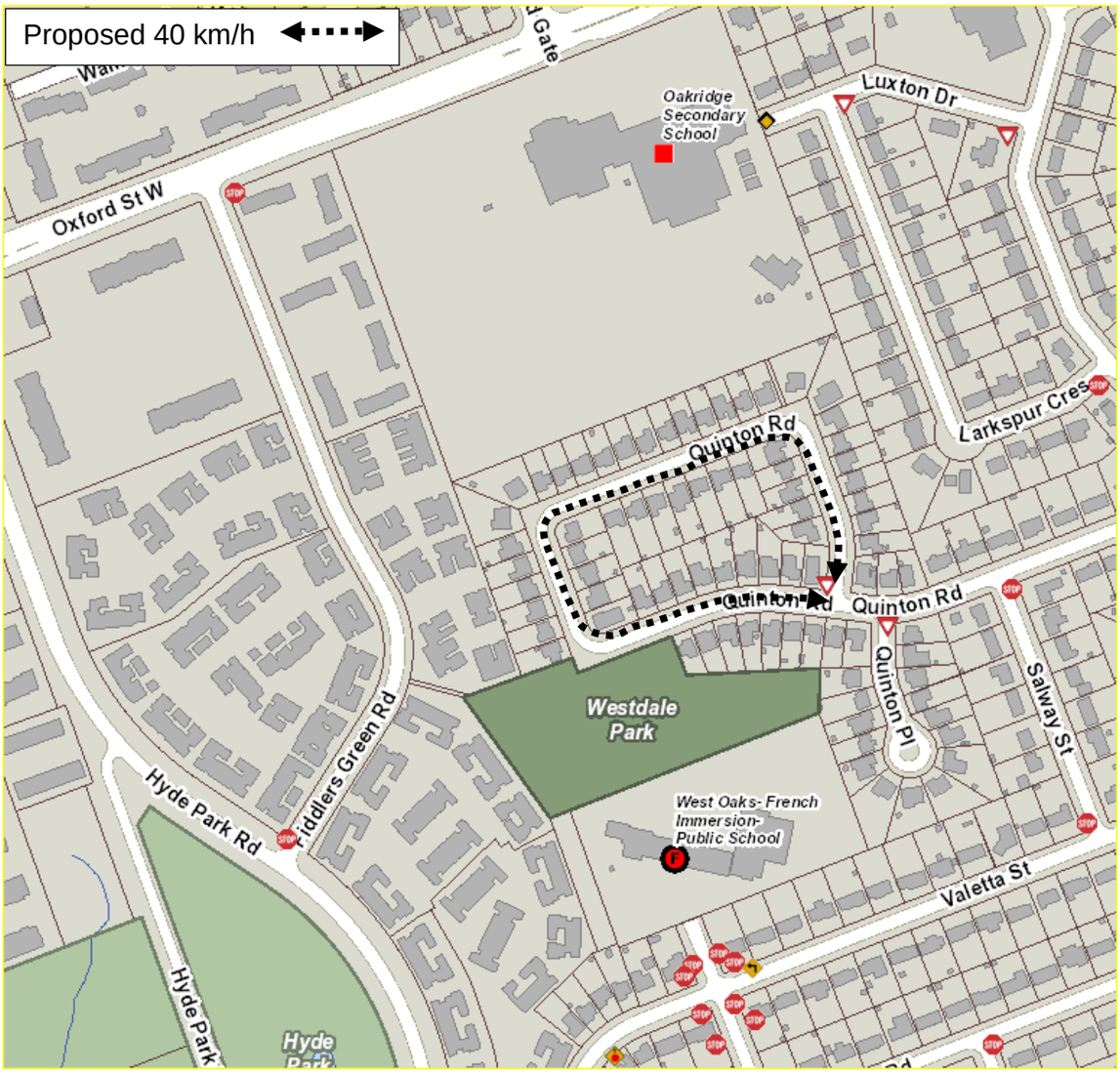


Figure 10: Oakridge Secondary School

An amendment is required to Schedule 17.1 (Lower Speed limits) for the above changes.

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

PREPARED BY:	REVIEWED & CONCURRED BY:
SHANE MAGUIRE, P. ENG. **DIVISION MANAGER,** **ROADWAY LIGHTING & TRAFFIC CONTROL**	**EDWARD SOLDO, P.ENG.** **DIRECTOR, ROADS AND TRANSPORTATION**

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

Y:\Shared\Administration\COMMITTEE REPORTS\PS-113 Amendments\2018\2018-05-28\CWC May 28 2018 Council June 12 2018 (TRAFFIC PARKING BY-LAW AMENDMENTS) Ver. 4.docx

May 10, 2018/sm

Attach: Appendix A: Proposed Traffic & Parking By-Law Amendments
Appendix B: 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>No Stopping</u>

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

Dundas Street	North	Clarence Street	A point 62 m east of Clarence Street	Anytime
Dundas Street	South	A point 40 m west of Wellington Street	A point 28 m east of said street	Anytime

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

Dundas Street	South	Wellington Street	A point 28 m east of Wellington Street	Anytime

2. <u>No Parking</u>

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

Dundas Street	South	A point 65 m east of Richmond Street	Clarence Street	Anytime
Maitland Street	East	A point 37 m north of Central Avenue	A point 46 m south of Central Avenue	Anytime
Talbot Street	West	A point 50 m north of King Street	King St	Anytime

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

Dundas Street	North	Richmond Street	A point 70 m east of Richmond Street	Anytime
Dundas Street	South	Richmond Street	A point 63 m west of Clarence Street	Anytime
Maitland Street	East	Princess Avenue	A point 37 m north of Central Avenue	Anytime
Talbot Street	West	A point 42 m north of King Street	King St	Anytime

3. <u>Prohibited Parking at Bus Stops</u>

Schedule 3 (Prohibited Parking at Bus Stops) of the PS-113 By-law is hereby amended by **deleting** the following rows:

Carling Street	North	A point 62 m west of Richmond Street	A point 50 m west of the said street
Dundas Street	South	A point 28 m east of Wellington Street	A point 51 m east of the said street

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

Dundas Street	South	Wellington Street	A point 51 m east of Wellington Street

4. <u>Loading Zones</u>

Schedule 5 (Loading Zones) of the PS-113 By-law is hereby amended by **deleting** the following rows:

Maitland Street	West	From a point 115 m north of Princess Avenue to a point 77 m north of said street	
Carling Street	South	From a point 50 m east of Talbot Street to a point 33 m west of Richmond Street	8:00 a.m. to 6:00 p.m.
Dundas Street	South	From a point 51 m east of Richmond Street to a point 65 m east of the said street	6:00 a.m. to 9:00 p.m.

Schedule 5 (Loading Zones) of the PS-113 By-law is hereby amended by **adding** the following rows:

Carling Street	South	From a point 50 m east of Talbot Street to a point 77 m west of Richmond Street	8:00 a.m. to 6:00 p.m.
Carling Street	South	From a point 41 m west of Richmond Street to a point 33 m west of Richmond Street	8:00 a.m. to 6:00 p.m.
Dundas Street	South	From a point 62 m west of Clarence Street to a point 49 m west of Clarence Street	8:00 a.m. to 6:00 p.m.
Dundas Street	South	From a point 30 m west of Wellington Street to a point 20 m west of Wellington Street	8:00 a.m. to 6:00 p.m.

5. <u>Schedule 6 Limited Parking</u>

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

Maitland Street	East	Piccadilly Street to Queens Avenue	8:00 a. m. to 6:00 p.m.	2 Hours Except Saturdays

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

Maitland Street	West	Princess Avenue to Central Avenue	8:00 a. m. to 6:00 p.m.	2 Hours
Maitland Street	East	Central Avenue to Piccadilly Street	8:00 a. m. to 6:00 p.m.	2 Hours
Maitland Street	East	Queens Avenue to Princess Avenue	8:00 a. m. to 6:00 p.m.	2 Hours

6. <u>Lower Speed Limits</u>

Schedule 17.1 (Lower Speed Limits) of the PS-113 By-law is hereby amended by **adding** the following rows:

Biscay Road	Sherene Terrace	A point 225 m north of Sherene Terrace	40 km/h
Charles Street	Mount Pleasant Avenue	Wharncliffe Road N	40 km/h
Cramston Crescent	Adevon Avenue	Valetta Street	40 km/h
King Street	Ashland Avenue	A point 55 m east of Oakland Avenue	40 km/h
Oak Park Drive	Kelly Street	Valetta Street	40 km/h
Pinetree Drive	Oban Crescent	North limit of Pinetree Drive	40 km/h
Quinton Road	Quinton Road (south leg)	Quinton Road (east leg)	40 km/h
Sherene Terrace	Valetta Street	Biscay Road	40 km/h
Valetta Street	Oak Park Drive	Sherene Terrace	40 km/h
Victoria Street	West limit of Victoria Street	A point 46 m west of Northdale Street	40 km/h

7. <u>2 Hour Metered Zones</u>

Schedule 20 (2 Hour Metered Zones) of the PS-113 By-law is hereby amended by **adding** the following rows:

Carling Street	North	A point 62 m west of Richmond Street	A point 50 m west of Richmond Street	8:00 a.m. to 6:00 p.m.
Carling Street	South	A point 77 m west of Richmond Street	A point 45 m west of Richmond Street	8:00 a.m. to 6:00 p.m.

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

PASSED in Open Council on June 12, 2018

Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading – June 12, 2018
Second Reading – June 12, 2018
Third Reading – June 12, 2018

APPENDIX B

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>Prohibited Parking at Bus Stops</u>

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

Carling Street	North	A point 62 m west of Richmond Street	A point 50 m west of the said street

This by-law comes into force and effect on September 1, 2018.

PASSED in Open Council on June 12, 2018

Matt Brown
Mayor

Catharine Saunders
City Clerk

First Reading – June 12, 2018
Second Reading – June 12, 2018
Third Reading – June 12, 2018

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2017**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**HIGH SPEED RAIL**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the High Speed Rail initiative:

a) the Civic Administration **BE DIRECTED** to undertake a High Speed Rail Corridor Protection Study to evaluate the potential land use impacts, develop design considerations for City infrastructure and identify corridor lands to be protected; and,

b) the Mayor **BE AUTHORIZED** to submit a letter to the Minister of Transportation requesting that the Province appoint a representative from the City of London to the Planning Advisory Board for High Speed Rail.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Civic Works Committee - June 19, 2012 - London 2030 Transportation Master Plan
- Civic Works Committee - October 4, 2016 – Southwest Ontario's Public Transportation Opportunities
- Civic Works Committee – July 17, 2017 – High Speed Rail

COUNCIL'S 2015-2019 STRATEGIC PLAN

Municipal Council has recognized the importance of rapid transit, improved mobility and improving travel to other cities through better transportation connectivity specifically regional transit connections in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan) as follows:

Strengthening Our Community
- Healthy, safe, and accessible city

Building a Sustainable City
- Robust infrastructure
- Convenient and connected mobility choices

Leading in Public Service
- Strong and healthy environment
- Beautiful places and spaces
- Responsible growth

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

- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

High Speed Rail

On May 19th 2017, Premier Kathleen Wynne, Deb Matthews, Deputy Premier and MPP for London North Centre, and Steven Del Duca, Ontario's Minister of Transportation, met in London to announce that the province is moving ahead with preliminary design work for High Speed Rail (HSR) along the Toronto-Windsor corridor. Ontario would be the first province to undertake a transformational update to its rail technology to decrease commuter travel times and the project would support economic growth across Southwestern Ontario.

High speed rail will be an economic and transportation game-changer for the City of London and Southwestern Ontario. It will provide congestion relief along the provincial highway system, reduce air emissions, enhance roadway safety, promote the Southwestern and Central Ontario economy through better goods movement and provide commuters with the speed and comfort required to make non automobile travel, a sustainable, environmentally friendly and viable transportation mobility choice.

DISCUSSION

In 2015, the report from the Honourable David Collenette, Ontario's Special Advisor on HSR, provided an overview of project feasibility. (http://www.mto.gov.on.ca/english/publications/high-speed-rail-in-ontario-final-report/)

The report recommended a concept-level route and line speed that showed a positive performance and high potential to attract ridership. Further investigation, design, and analysis will follow as part of the environmental assessment (EA) process. The key characteristics to be developed and explored in the planning, design and EA stage are:

- An above ground HSR corridor that uses existing infrastructure where possible to drive down costs;
- Ability to serve long distance business/ leisure trips and commuter trips, particularly between Toronto, Pearson Airport, Guelph, Kitchener-Waterloo and London;
- Use of running speed of around 250 km/h as appropriate to provide the best value for money
- Central/downtown stations that are connected to rapid transit and local transport networks; and
- Delivering HSR service in two phases: 1) Toronto to London, 2) London to Windsor

In May of 2017, the feasibility study was released which concluded there was a business case for high speed rail along the Toronto-Windsor corridor (**Figure 1**) and that there are opportunities to engage the private sector in financing and delivering the project. (http://www.mto.gov.on.ca/english/publications/high-speed-rail-in-ontario-final-report/)

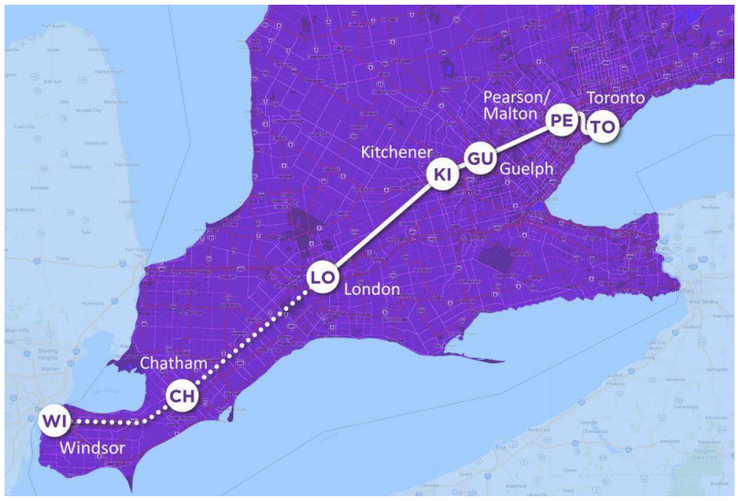


Figure 1 – HSR

High Speed Rail Terms of Reference

In February of 2018, the Province issued a Notice of Commencement for the High Speed Rail Environmental Assessment Terms of Reference (Appendix A).

The HSR study will be carried out in accordance with the requirements of the Ontario Environmental Assessment Act. The Ministry of Transportation is undertaking the planning, design, and environmental assessment approvals for High Speed Rail (HSR) for the Kitchener-Waterloo to London segment of the HSR corridor. The project will proceed as an Individual EA under the Ontario EA Act.

An Individual EA is a more involved process for large projects and requires a two-stage approval. First is the development and approval of an EA Terms of Reference (ToR). The second is the planning, preliminary design, and EA study. A ToR is subject to the requirements of the Ontario EA Act, and provides an approved plan/framework that must be followed during the subsequent Individual EA study.

The second stage of work (planning, preliminary design, and EA study) will further define the HSR segment from Kitchener-Waterloo to London in accordance with the plan/framework detailed in the approved ToR (e.g. HSR route location, station locations,

etc.). The ToR will provide a framework for meeting the requirements of both the Ontario EA Act and Canadian EA Act.
Further information is available at https://www.ontario.ca/page/high-speed-rail#section-6

High Speed Rail Corridor Protection

In July of 2017, Municipal Council approved the following recommendation related to High Speed Rail:

"That the implementation of a High Speed Rail link between Windsor and Toronto BE ENDORSED as a priority for the City of London; "

The importance of High Speed Rail, including the protection of transportation corridors, is addressed in many of the policies of The London Plan. The role of HSR as a key element of the City's future transportation system was identified as a priority of Londoners through the ReThink London process (Policy 11).

Policies in the The London Plan highlight the importance of connecting London to the surrounding region. A listing of London Plan policies is included in Appendix B.

Both the City's Official Plan policies and the policy statements of the *Provincial Policy Statement, 2014* identify the importance of providing for and protecting the infrastructure and corridors necessary for High Speed Rail.

The London Plan identifies the High Speed Rail corridor along the CN mainline as a potential route and while the HSR Environmental Assessment is being undertaken, it is important to ensure that the City plans for and protects for its potential implementation.

The potential alignment for high speed rail is vulnerable to encroachment and development which could constrain or hinder its implementation. Early protection of the corridor will allow for an integration with land use policies and consideration in reviewing and approving development proposals.

The City is proposing to undertake a HSR Corridor Protection Study to ensure the HSR corridor is designed, buffered and/or separated from adjacent land uses to prevent or mitigate adverse effects from noise, minimize risk to public health and safety, and to ensure the long-term viability of the HSR corridor.

The study would help inform the provincial HSR EA as well as ongoing City led initiatives along the corridor such as the Wharncliffe/CN grade separation and the Wonderland Road Environmental Assessment.

Further to the Rail Rationalization report presented to the Civic Works Committee on May 28th 2018, the High Speed Rail Corridor Protection Study could also take into consideration the protection of railway right of way for a future consolidation of CP and CN.

In advance of the completion of this HSR Corridor Protection Study, the policies of both the City's Official Plan and the PPS would provide a policy basis for the protection of the HSR corridor from both encroachment and incompatible development. Sensitive land uses are to be directed away from rail corridors, and sufficient rights-of-way must be retained to ensure the safe, effective and efficient movement of the HSR.

The key objective of the HSR Corridor Protection Study would be to review the feasibility of implementating/integrating HSR or a relocated CP railway line along the CN mainline and will include the following components:

- Evaluation of existing rail infrastructure and roadway infrastructure to accommodate future implementation;
- Environmental impacts and site remediation;
- Economic impacts of rail delays throughout the city;
- Impacts on existing and future development opportunities;
- Impact on emergency response and goods movement;
- Identification of lands along the corridor that would need to be protected for the future implementation; and
- Stakeholder consultation including civic departments and emergency services;

The project is anticipated to cost $400,000. Approval from the Province will be sought to reallocate $200,000 from Phase 1 of the Public Transit Infrastructure Funding (PTIF). The project is anticipated to be completed by mid 2019.

Consultation

The Ministry of Transportation High Speed Rail branch has consulted the City of London administration on a number of occasions, providing updates on the project status and met with staff to gain an understanding of the interactions with various City led projects such as Bus Rapid Transit and railway related initiatives.

The Ministry of Transportation will be engaging with stakeholders, municipalities and communities in the Toronto-Windsor corridor through a number of consultation opportunities throughout the planning, design and EA process in order to better understand the thoughts and views of community members and provide opportunities to learn more about high speed rail.

The Province has established a Planning Advisory Board that will provide focused strategic advice on high speed rail, engage with the private sector, build partnerships, and raise the profile of Ontario's high speed rail program. The members will serve on a part-time basis for a maximum three-year term. On February 13th 2018, the Honourable David Collenette was appointed as Chair of the Planning Advisory Board.

The board may consist of representation from a wide range of areas, including Indigenous communities, business, agricultural communities, high tech, engineering, environmental sciences, transportation planning, and financing and delivery of infrastructure projects. It will provide strategic advice on major business issues associated with the project.

On April 11th 2018, the City of London participated in a High Speed Rail advocacy day in partnership with the City of Kitchener, the Region of Waterloo, the University of Guelph and various private sector partners located along Phase 1 of the HSR corridor. The City of London delegation included Mayor Matt Brown, Councillor Jesse Helmer, and senior staff. Participants met with representatives from the Government of Ontario as well as representatives from the Progressive Conservative caucus and the NDP caucus with the goal of communicating the transformational effect that HSR will have on communities across Southwestern Ontario. Specific meetings included:

- Hon. Kathryn McGarry, Minister of Transportation; Jennifer Graham-Harkness, Executive Director of High Speed Rail
- MPP Catherine Fife (Kitchener–Waterloo); MPP Peggy Sattler (London West); MPP Wayne Gates (Niagara Falls)
- MPP Norm Miller (Parry Sound–Muskoka)

The Civic Administration will continue to engage with the Ministry of Transportation on a technical level.

As the province moves forward with the HSR initiative, it will be critical for London to remain actively engaged in the discussion and planning efforts. HSR has been identified as a priority for the City of London and given the significance of this initiative for London, it is recommended that the Province be requested to appoint a representative from the City to the Planning Advisory Board.

Acknowledgements

This report was prepared with input from Adam Thompson, Manager III, Government & External Relations and Greg Barrett, Manager, Long Range Planning and Research, Planning Services.

SUBMITTED BY:	**RECOMMENDED BY:**
EDWARD SOLDO, P.ENG. DIRECTOR, ROADS AND TRANSPORTATION	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**

Attach: Appendix “A” – Notice of Commencement – HSR EA Terms of Reference
Appendix “B” – The London Plan policies related to High Speed Rail

Appendix A – Notice of Commencement – HSR EA Terms of Reference

ONTARIO GOVERNMENT NOTICE

Notice of Commencement of the High Speed Rail Environmental Assessment Terms of Reference

The Ontario **Ministry of Transportation (MTO)** has initiated an Environmental Assessment (EA) under the Ontario *Environmental Assessment Act* for high speed rail (HSR) from Kitchener-Waterloo to London.

THE PROCESS

This study will be carried out in accordance with the requirements of the Ontario *Environmental Assessment Act.* The first step of the process is the preparation of a Terms of Reference. The Terms of Reference will set out the proponent's framework and work plan for addressing the Ontario *Environmental Assessment Act* requirements when preparing the environmental assessment, including such things as the alternatives that will be considered and the public consultation activities that will be carried out. If approved by the Minister of Environment and Climate Change, the Terms of Reference will provide the framework and requirements for the preparation of the environmental assessment.

In May 2017, the Premier of Ontario announced that the province would be moving ahead with the planning, design, and EA work for HSR. MTO is embarking on a transformative program to deliver HSR to Ontario – the first for Canada and one of the largest infrastructure projects in Ontario. High speed rail cuts down on travel times, gives people more low-carbon transportation options, and creates new opportunities for workers and businesses.

CONSULTATION

Members of the public, agencies, Indigenous communities and other interested persons are encouraged to actively participate in the planning process by attending consultation opportunities or contacting staff directly with comments or questions. Consultation opportunities are planned throughout the planning process and will be advertised to the public and interested persons. A number of options will be used to advertise consultation opportunities such as, the project website (**www.ontario.ca/highspeedrail**), local newspapers and direct mail.

For further information on the proposed study, please visit our website at **www.ontario.ca/highspeedrail** or contact:

John Slobodzian
MTO Project Coordinator
2nd Floor, Garden City Tower
301 St. Paul Street, St. Catharines, ON L2R 7R4
tel: 905-704-2204
e-mail: john.slobodzian@ontario.ca

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tel: 905-704-2213
e-mail: nicole.zdero@ontario.ca

All personal information included in a submission – such as name, address, telephone number and property location – is collected, maintained and disclosed by the Ministry of the Environment and Climate Change for the purpose of transparency and consultation. The information is collected under the authority of the Ontario *Environmental Assessment Act* or is collected and maintained for the purpose of creating a record that is available to the general public as described in s.37 of the *Freedom of Information and Protection of Privacy Act.* Personal information you submit will become part of a public record that is available to the general public unless you request that your personal information remain confidential. For more information, please contact the Ministry of the Environment and Climate Change's Freedom of Information and Privacy Coordinator at 416-327-1434.

Ontario

Appendix B - The London Plan policies related to High Speed Rail

Policy 56 in the Our Strategy Chapter of the Plan states:

56_ Direction #2 Connect London to the surrounding region

1. Connect London to important cities across Ontario and beyond through high speed rail.
2. Ensure there are strong mobility and communication linkages to regional municipalities.
3. Enhance connections with, and invest in, the Quebec-Windsor corridor to benefit London.

In the same Chapter, Policy 60 states:

60_ Direction #6 Place a new emphasis on creating attractive mobility choices

11. Plan for, and invest in, a strong network of transportation corridors that promote connection and mobility throughout the city and to the surrounding region and highways. Connect London to cities throughout Ontario and beyond through high speed rail.

The Mobility Framework of The London Plan establishes a high level plan for moving people, goods and services throughout our city, to the region and beyond. Under the heading Rail Network and Airport, Policies 103 to 105 state:

103_ Figure 8 illustrates our rail network – including freight, passenger, and future high speed rail – and our international airport in London. These are important connections to the surrounding region, the Quebec-Windsor Corridor, a variety of large cities across Canada and beyond.

104_ High speed rail will be planned, facilitated, and supported to connect London to other important cities in Ontario and beyond. Our high speed rail station will be located in our Downtown, which will support a thriving core and allow for a strong integration with the hub of our rapid transit system.

105_ London will continue to be served by a strong network of rail infrastructure that will service our employment lands.

In the Mobility Chapter of The London Plan, Mobility is defined in Policy 307 as:

307_ Mobility is the movement of people and goods through, and beyond, the city from one location to another in a safe, accessible, convenient, and affordable manner. Mobility, typically referred to as transportation, can be classified into five main types: walking, cycling, transit, movement with mobility devices, and motorized vehicle movement. Our fixed mobility infrastructure includes such things as streets, sidewalks, cycling lanes, rapid transit lanes and/or rails, stations, pathways, parking facilities, and the many physical features that are supplementary to, and supportive of, this infrastructure.

Additional policies of the Mobility Chapter Support the implementation of HSR as part of the City’s future transportation system.

313_ Through the plans and actions we take to design and build our mobility infrastructure, we will:

1. Link our land use plans and our mobility infrastructure plans so that they are mutually supportive.
2. Support the efficient, safe and convenient movement of goods and services.
8. Support and effectively connect to future high speed rail that connects London to large centres across North America.

314_ The city's mobility network will be enhanced by connecting to rail service. It is a long-term goal to connect London to a high speed rail network that will link our city to the Windsor-Toronto corridor and the Chicago-New York corridor.

317_ The primary hub for international, inter-provincial, and inter-municipal connections by rail and bus will be directed to a central location within the Downtown.

318_ Regional transit will be pursued and the requisite infrastructure to support it will be established.

Specific High Speed Rail policies are also included within the Mobility Chapter.

320_ The City's rapid transit hub should coincide with the high speed rail station within Downtown London to make rapid transit connections to rail as convenient as possible.

321_ Commuter parking facilities may be established at the Transit Villages to allow for regional population to easily connect to the Downtown and high speed rail services.

322_ Public parking, showers, lockers and outdoor amenity areas should be provided in support of the high speed rail station.

323_ The high speed rail station will be well connected to the major destinations within the Downtown. These routes will offer a very high level of pedestrian amenity.

324_ Centrally located rail yards and facilities that could be utilized for high speed rail vehicle storage and maintenance over the long term will be protected, where practical and possible.

325_ Expected high speed rail corridors within the City will be protected from encroachment, pending the completion of the Province's plans for high speed rail route alignments.

Policies 324 and 325 specifically relate to the protection of HSR-related infrastructure and corridor protection.

Finally, the Downtown policies speak to the role of High Speed Rail in the Downtown.

796_ Our Downtown will be an exceptional neighbourhood unto itself - with housing, services, and amenities targeted to serve a wide spectrum of lifestyles such as

families, seniors, and young adults. The shared economy will thrive in our core, including such features as shared office and work space, as well as shared car and bicycle fleets. Our Downtown will be the most highly connected location in the entire city, being the hub for rapid transit, rail, high speed rail, and the multi-use pathway along the Thames River. Downtown will offer the city's premier pedestrian experience.

799_ We will realize our vision for Downtown by implementing the following in all the planning we do and the public works we undertake, we will:

18. Establish the Downtown as the hub of mobility in our city, serving as the city's primary station for rapid transit, regional bus, rail and any future high speed rail network.
19. Ensure that our city's major commuter rail connections are located in the Downtown.

Through the *Provincial Policy Statement, 2014*, (PPS) the Province provides policy direction on matters of provincial interest related to land use planning and development. The PPS sets the policy foundation for regulating the development and use of land. All decisions that affect planning matters are "to be consistent with" the policy statements of the PPS.

The policies of Section 1.6.8 Transportation and Infrastructure Corridors state:

1.6.8.1 Planning authorities shall plan for and protect corridors and rights-of-way for *infrastructure*, including transportation, transit and electricity generation facilities and transmission systems to meet current and projected needs.

1.6.8.2 *Major goods movement facilities and corridors* shall be protected for the long term.

1.6.8.3 Planning authorities shall not permit *development* in *planned corridors* that could preclude or negatively affect the use of the corridor for the purpose(s) for which it was identified.

New *development* proposed on *adjacent lands* to existing or *planned corridors* and transportation facilities should be compatible with, and supportive of, the long-term purposes of the corridor and should be designed to avoid, mitigate or minimize negative impacts on and from the corridor and transportation facilities.

1.6.8.4 The preservation and reuse of abandoned corridors for purposes that maintain the corridor's integrity and continuous linear characteristics should be encouraged, wherever feasible.

1.6.8.5 When planning for corridors and rights-of-way for significant transportation, electricity transmission, and *infrastructure* facilities, consideration will be given to the significant resources in Section 2: Wise Use and Management of Resources.

The policies of Section 1.6.9 Airports, Rail and Marine Facilities state:

1.6.9.1 Planning for land uses in the vicinity of *airports*, *rail facilities* and *marine facilities* shall be undertaken so that:

a) their long-term operation and economic role is protected; and

b) *airports*, *rail facilities* and *marine facilities* and *sensitive land uses* are appropriately designed, buffered and/or separated from each other, in accordance with policy 1.2.6.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2017**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**RAILWAY RATIONALIZATION**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to Railway Rationalization initiative:

a) that a strategy of strategic grade separations combined with the implementation of technologies or infrastructure aimed at improving the safety of the rail/urban interface **BE ENDORSED** as the long term approach to mitigating the impact of rail activity in the City of London;

b) that Civic Administration **BE DIRECTED** to identify, review and prioritize locations for the implementation of technologies and infrastructure for inclusion in the Capital Budget and Development Charges processes; and,

c) the Mayor **BE REQUESTED** to submit a letter to the Federal Minister of Transport and Federal Minister of Infrastructure and Communities, and London MPs, outlining the need for increased sustained funding for railway grade crossing improvements.

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 - June 19, 2012 - London 2030 Transportation Master Plan
- Civic Works Committee – February 25, 2013 – Railway Pedestrian Crossing Safety
- Civic Works Committee – October 7, 2013 – Railway Pedestrian Crossing Safety
- Civic Works Committee – March 29, 2016 – Transport Canada Grade Crossing
- Regulations
- Civic Works Committee – July 17, 2017 – High Speed Rail
- Civic Works Committee – September 26, 2017 – Transport Canada Grade Crossing Regulations and Railway Funding Application

COUNCIL'S 2015-2019 STRATEGIC PLAN

Municipal Council has recognized the importance of rapid transit, improved mobility and improving travel to other cities through better transportation connectivity specifically regional transit connections in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan) as follows:

Strengthening Our Community
- Healthy, safe, and accessible city

Building a Sustainable City
- Robust infrastructure
- Convenient and connected mobility choices

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

BACKGROUND

Municipal Council, at its meeting held on May 16, 2017 resolved:

e) the Civic Administration BE AUTHORIZED to work with appropriate parties, including the Canadian Transportation Agency (CTA) to request they facilitate discussion between CP and CN Rail 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. This report summarizes their positions on the concept of a rail rationalization.

DISCUSSION

Context

London's residents and visitors are increasingly delayed by Canadian Pacific (CP) and Canadian National (CN) freight trains that pass through level crossings throughout the city. This delays motorists and pedestrians, increases the risk of accidents, causes congestion at adjoining intersections, restricts access to businesses and residences, increases vehicle emissions and operating costs, and may delay emergency services response times.

Canadian National Railway (CN) and Canadian Pacific Railway (CP) both have a long history in the city as the mainlines were established starting in 1853.

The City of London is traversed by the CN main line double track between Toronto and Chicago (Dundas and Strathroy subdivisions) and a CN secondary single track line to St. Thomas (Talbot subdivision). Goderich-Exeter Railway (GEXR) leases a CN secondary single track line to Stratford (Thorndale subdivision), which enters the city from the northeast. The CP main line single track between Toronto and Detroit (Galt and Windsor subdivisions) runs through the centre of the city.

Freight trains do not run on a set schedule like passenger trains do -- trains operate 24 hours a day, seven days a week. Railways transport goods based on customer

requirements, the number of trains fluctuate with customer demands and schedules are influenced by network logistics.

Rail transportation is a relatively economical and environmentally friendly means of transporting freight containers of large and bulk goods over long distances, reducing the amount of truck traffic on provincial and local roadways. CP operates a yard terminal immediately to the east of Adelaide Street. CN operates a yard in the area of Egerton Street.

Via Rail operates regional passenger service through the London station on the CN main line as part of the Quebec City–Windsor Corridor, with connections to the United States.

The City has a total of 91 at-grade and grade separated crossing within City boundaries as identified on **Figure 1** and **Table 1**.

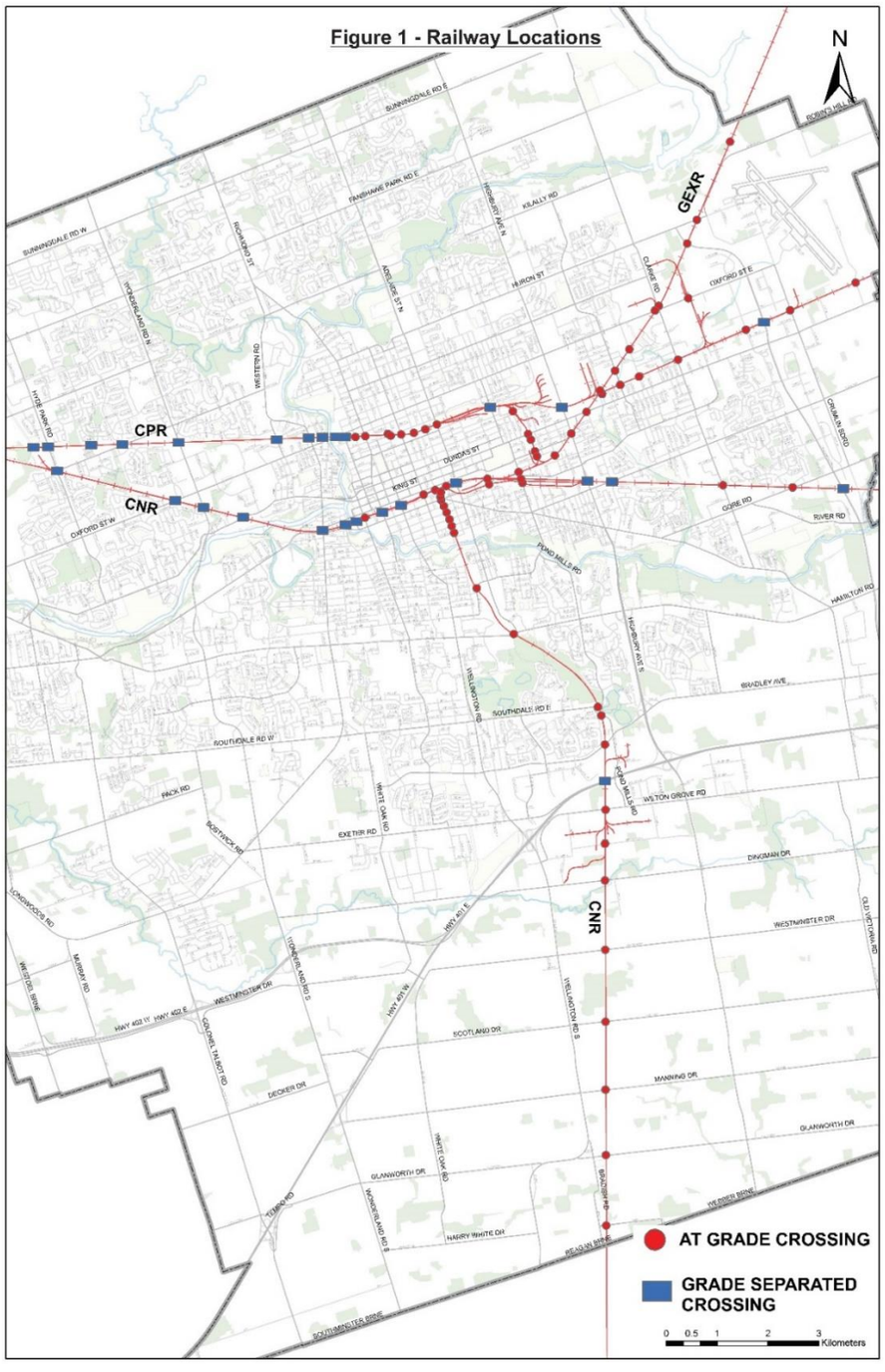

Table 1 – Railway Crossing Breakdown

Railway Company	Crossings
Canadian National Railway	
At-Grade Crossings	
Flashing Lights, Bells and Gates	12
Standards Railway Crossing Sign	21
Flashing Lights and Bells	6
Grade Separated Crossings	14
Total	53
Canadian Pacific Railway	
At-Grade Crossings	
Flashing Lights, Bells and Gates	14
Standard Railway Crossing Sign	0
Flashing Lights and Bells	1
Grade Separated Crossings	13
Total	28
Goderich-Exeter Railway	
At-Grade Crossings	
Flashing Lights, Bells and Gates	10
Standard Railway Crossing Sign	0
Flashing Lights and Bells	0
Grade Separated Crossings	0
Total	10

Rail Rationalization History

The fact that many rail lines continue into the centers of cities is a reminder of days gone by. Passenger travel by train has been overtaken by roadway travel across most of the country. in its place, freight rail traffic has intensified. Trains have also gotten longer and heavier in a drive to lower unit costs and increase the productive capacity of railway networks. Up until the 1990s, for example, train lengths were on average around 5,000 feet; now they stretch up to 12,000 feet or more.

Although longer trains provide benefits for railways and their customers, there are disadvantages for communities when longer trains translate into longer wait times at level crossings.

In 1972, the City undertook the London Urban Transportation Study. As part of the study, a London Railway Relocation or Consolidation Study was completed to review existing railway facilities and operations, inventory industrial rail needs and to develop conceptual schemes for railway changes. The goal was to reduce rail/roadway conflicts and release right of way for other potential purposes. The study was completed incorporating a potential ring road for the city (extension of Highbury Avenue freeway north of Hamilton Road).

The recommended rail rationalization concept was a consolidation of the CN and CP railways along the existing CN mainline corridor, the relocation of the railway yards outside of the city boundaries and a relocated CN corridor (Thorndale subdivision) to the east of the airport as illustrated on **Figure 2**.

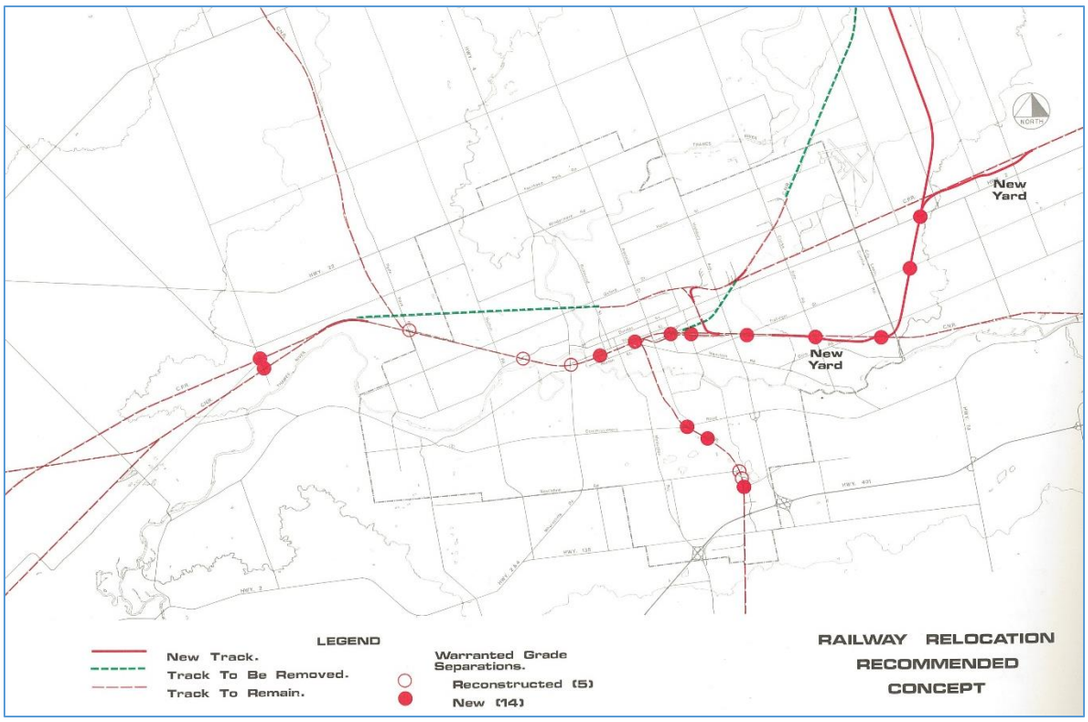

Figure 2 – Recommended Rail Consolidation (1972)

Due to a lack of funding and absence of agreement with the railway companies and surrounding municipalities, the rail consolidation was never implemented. A number of new grade separations were implemented to enhance safety and improve traffic flows.

In 2000, Council received a report entitled “Rail in London”. The report looked at a creating a strategic disposition regarding rail by examining three options. It reviewed an enhanced status quo whereby grade separations were implemented at strategic locations, an integration of CP and CN on a single corridor and a relocation option outside the developed portion of the City.

The absence of funding from senior levels of government rendered the implementation of integration or relocation as unaffordable.

Key Factors for Consideration of Relocation and/or Consolidation

There are a number of key factors to take into consideration when considering a potential consolidation of the CP railway with the CN railway mainline.

Strategic Linkages – The CP and CN lines are core strategic linkages for both companies. The consolidation of railway lines in the 1990’s through southern Ontario removed alternative opportunities for bypassing of railway freight in the event of operational disruptions and when capital improvements are required. Combining all rail traffic on one corridor provides no system flexibility in rail operations.

Capacity – The existing CN is a capacity constrained corridor. The relocation of the CP would require an additional third track to be built along the CN mainline. The current proposal to add High Speed Rail to the CN corridor could stress this capacity further.

Relocation of CP Yard – A location external to the city boundary in another municipality would be required to accommodate the yard, which would require approval of that municipality.

Business Integration – The scheduling of freight traffic between two independent highly competitive railway companies would be operationally challenging. For both railway companies to cooperate, there must be significant benefits to be realized by both parties.

Passenger Train Service – VIA Service or the future potential High Speed Rail would be operationally challenged to share space and track priority with two freight companies.

Capital and Operating Costs – The high cost of relocating the CP operations, the cost of a new line and yard and business operating losses from existing freight customers in London will be factors in obtaining approval from the railways. Typically the railways seek to recover these costs from governments.

Several cities (including Red Deer, Lethbridge, Regina, and Calgary) have worked with railway companies and the federal government to relocate rail operations to sites on the periphery of urban centres. These relocations help moderate noise, vibration, safety concerns and traffic delays, along with risks associated with dangerous goods transport, and create new options for the introduction or expansion of passenger or commuter rail.

The City of Saskatoon recently undertook a feasibility study to assess relocation on a new corridor or consolidation of CP onto a CN corridor. The City determined that consolidation is largely challenged by the legislative requirement to not impose additional costs on the railway. The option to consolidate CP and CN operations was deemed to have the least potential given the complexity of running two railways in the same corridor. The cost to relocate CP was approximately $590 million.

Legislative Environment

Railways are under federal jurisdiction by virtue of s. 92(10)(a) of the Constitution Act, 1867. As railways are explicitly listed as an undertaking that is excluded from provincial jurisdiction it is unnecessary to consider whether they are a “work for the general advantage of Canada” under s. 92(10)(c).

Railway companies do not independently have the power to expropriate land, however under s. 4.1 of the federal Expropriations Act, they can request for the Minister of Transport to have the land expropriated if the railway requires the land for the purposes of its railway and has unsuccessfully attempted to purchase the land. The Minister will expropriate the land if he or she is of the opinion that the land is required for the railway and recommends to the Governor in Council, who in turn consents.

The Canadian Transportation Agency (CTA) administers the approvals for specific railway line construction projects. Under subsection 3(1) of the Railway Relocation and Crossing Act (RRCA), if a municipality cannot reach an agreement with a railway company on the relocation of railway lines, it permits an application to the CTA for an order to carry out an accepted plan.

The RRCA empowers the CTA to order a railway company to do things like:

- remove railway structures;
- build new facilities;
- stop operating on certain lines; or,
- allow other railway companies onto their trackage in urban areas.

However, these powers may only be used when certain criteria are met, including a determination by the CTA that any such relocation or rerouting would occur at **no net cost to the railway company.**

Before the CTA may receive the application, the Minister of Transport, Infrastructure and Communities must be satisfied that any federal programs contemplated for use in the urban development plan are available and would contribute significantly to the improvement of the urban area.

The Governor in Council must also be prepared to authorize the allocation of the necessary funds for relocation grants for the transportation plan.

An application must contain a financial plan showing how the costs and benefits of the transportation plan are to be shared by the province, the municipalities and the railway companies or any other parties affected by the accepted plan. It must also indicate how and when the costs of the transportation plan are to be met and all financial assistance available to meet those costs.

The CTA may accept the transportation and financial plan as submitted or with changes it considers necessary if, among other factors, the CTA finds that the financial plan will not:

- impose on the railway company any losses greater than the benefits received; or,
- confer on the railway company any benefits greater than the losses incurred.

The CTA must also be satisfied that the financial assistance set out in the financial plan will be committed.

Financial Impacts

A common principle is that every stakeholder who benefits from a rail relocation project will pay their fair share of the expense, which is significant for all parties. Municipalities promoting rail relocation to address proximity concerns are often the major beneficiaries of the initiative and will be expected to assume a proportionate percentage of the total costs. Railways will contribute, but only in proportion to their net benefit. The percentage that each stakeholder will pay is usually determined by negotiation. Due to major costs involved, the negotiation process are onerous.

The costs include items such as the capital construction of track and new yards, land expropriation, rezoning, environmental assessments, remediation of contamination, physical defences (berms, fences, crossings), upgrading existing or building new grade separations. Municipalities are also asked to pay railway operating costs associated with increased track lengths and/or travel time between railroad sites.

The federal government has funding available for a proportion of relocation expenditures, but not for the entire project. The RRCA states that other levels of government are responsible for a substantial share of the overall costs.

The “Rail in London” report in 2000 identified a potential cost of $200 to $300 million dollars plus property, $280 to $420 million plus property in 2018 dollars. The regulatory framework has changed considerably since the initial “Rail in London” report. There would be a need for additional grade separations due to higher traffic volumes. Environmental cleanup costs would also be significantly higher, as would the requirement for impact mitigation measures. The proposed addition of High Speed Rail

to the CN main corridor creates additional constraints and would likely increase costs further, particularly property costs to widen the corridor. The total cost would have to be confirmed through a detailed engineering assessment.

Railway Funding

Two federal funding programs exist related to rail. Based on the stated program objectives and recent applications to both programs, a low probability of program acceptance is anticipated.

The **Rail Safety Improvement Program (RSIP)** provides grant and contribution funding to improve rail safety and reduce injuries and fatalities related to rail transportation. The program funds:

- safety improvements to existing rail lines;
- closures of grade crossings; and,
- initiatives to raise awareness about rail safety issues across Canada.

The program consists of $55 million in funding which is available over a three year timeframe. The programs objective is to improve rail safety, contribute to the reduction of injuries and fatalities, and increase public confidence in Canada's rail transportation system. The deadline for 2017-2018 funding was August 1st 2017.

RSIP builds on three rail safety programs: the Grade Crossing Improvement Program (GCIP); the Grade Crossing Closure Program (GCCP); and Operation Lifesaver with an increased overall funding level, an expanded list of eligible recipients and a broadened scope of projects that could be funded to enhance rail safety. The new program is a comprehensive approach to improving the safety of rail transportation across Canada, through two key components:

- Public Education and Awareness; and,
- Infrastructure, Technology and Research.

There are 16,000 public rail crossings in Canada. The City of London submitted ten applications involving infrastructure upgrades identified in 2017. The selected GCR improvements are for works that are the responsibility of the City and that ranked highly on Transportation Canada's Grade Crossing Inventory. Works include items such as: road and sidewalk surface improvements, pavement markings, signage, and vegetation removal/clearing. The ten locations are:

- CNR – William Street (south of York Street)
- CNR – Maitland Street (south of York Street)
- CNR – Egerton Street (south of Brydges Street)
- CPR – St. George Street (intersecting Piccadilly Street)
- GEXR – Clarke Road (north of Oxford Street East)
- CPR – Richmond Street (south of Oxford Street East)
- CNR – Rectory Street (south of Florence Street)
- CNR – Gore Road (west of Marconi Gate)
- GEXR – Highbury Avenue (south of Florence Ave North)

- CNR – Colborne Street (south of York Street)

The City of London also partnered with CPR on one joint application for Pall Mall Street Pedestrian Crossing warning system upgrades. The total value of the 2017 applications is $286,000.

Any projects that receive federal funding (eligible for up to a maximum of 80% or 50% for joint applications) will need to be completed by March 31, 2019. The City is awaiting a response to the application.

The City's only recent successful application to this program was for 2015/2016 rail gates and road modifications at the CP / St. George at-grade crossing. The City received $34,000 for this safety improvement.

The **National Trade Corridors Fund (NTCF)** is a dedicated source of funding that will help infrastructure owners and users to invest in the critical assets that support economic activity and the physical movement of goods and people in Canada.

A total of $2 billion has been allocated over 11 years for the NTCF. Over this time frame, Transport Canada will request Expressions of Interest (EOI), to be followed by Comprehensive Project Proposals.

The City of London submitted two NTCF EOIs for the Adelaide Street/CPR Grade Separation and the Wharncliffe Road/CNR Grade Separation Projects in 2017. The City was shortlisted for submission of the Adelaide Street/CPR Grade Separation through a comprehensive project proposal in November of 2017, one of more than 350 applications received. The Wharncliffe Road/CNR Grade Separation EOI was not shortlisted.

The submission was not selected for funding as the NTCF is a merit-based program and more applications for eligible projects were received than could be funded under the program.

Railway Monitoring System

In April 2018, the City installed a TRAINFO railway blockage information system in order to capture the timing and duration of train blockages along the CP railway as a pilot program. TRAINFO system will be capable of anticipating the likelihood of a train event and notify the public via variable messaging signs, a live web portal, or other real-time data feeds. Additional information is included in Appendix B.

Railway Consolidation Engagement

Civic administration has been in contact with CN, CP, CTA and Ministry of Transportation of Ontario through project specific discussions regarding Western Road/CP, Wharncliffe/CN, Adelaide/CP, High Speed Rail and the rapid transit project. Further to Council's direction, a separate meeting was held with the CN, CP and CTA representatives regarding the potential railway rationalization. The railways identified a number of concerns related to the initiative.

CP indicated there was no business case for the railway to justify the relocation, so they would not contribute funds to either the cost of the feasibility study or any costs associated with a future proposal to relocate. While they agreed to participate in a

study at the City's cost, CP would not provide any confidential or propriety information related to business operations.

CN identified that the corridor is capacity constrained, would require an enormous amount of capital to upgrade the rail infrastructure, identified the need for additional grade separations on their railway line and identified that the relocation would create a detrimental impact on their operations and competitiveness. CN will not participate in any scoping exercise nor would they share data related to their operations.

MTO indicated that the High Speed Rail Planning Branch would be pleased to participate to consider existing and future railway needs in the City and their integration with rapid transit.

CONCLUSION

This report provides Council with an update on the Rail Rationalization and potential consolidation of the CP railway into the CN mainline corridor.

The complexity and cost of rail relocation, and the legislated requirement for railways to maintain cost-effective service to their customers are the primary deterrents to the consolidation of railway services.

As set out in the Railway Relocation and Crossing Act, a municipality cannot unilaterally decide to expropriate land owned by a railway company or force a railway to relocate as it would circumvent federal oversight of the operation of the railways through the Canadian Transportation Agency. Furthermore the relocation of the CP yard into a separate municipality could not be mandated by the City.

Based on the response and willingness from the primary partners, CP and CN, to proceed with relocation of the CP freight traffic onto the CN railway corridor or to a new alignment outside of the City of London, it is highly unlikely a mutually agreeable agreement could be reached. The City would have to provide the majority, if not the total funding for the relocation given the lack of available federal programs.

It is recommended that the City continue with a strategy of strategic grade separations such as the Adelaide Street / CP 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. The current train detection pilot for future real-time user data communication is an example of an emerging technology.

Further to the High Speed Rail report presented to the Civic Works Committee on May 28th 2018, it is recommended that the City undertake a High Speed Rail Corridor Protection Study to evaluate the potential land use impacts, develop design considerations for City infrastructure and identify corridor lands to be protected along the CN Railway mainline. The study would also take into consideration the protection of railway right of way for a future long term consolidation of CP and CN.

Acknowledgements

This report was prepared with input from Peter Kavcic, P.Eng., Transportation Planning and Design.

SUBMITTED BY:	**RECOMMENDED BY:**
EDWARD SOLDO, P.ENG. **DIRECTOR, ROADS AND TRANSPORTATION**	**KELLY SCHERR, P.ENG., MBA, FEC** **MANAGING DIRECTOR** **ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**

Attach: Appendix “A” – External Stakeholder Submissions
Appendix “B” – TRAINFO

Nathan Cato
Director Government Affairs

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October 20, 2016

Edward Soldo, P.Eng
Director Roads & Transportation
City of London
300 Dufferin Avenue
P.O. Box 5035
London, ON
N6A 4L9

Re: Rail Rationalization, City of London

Dear Mr. Soldo:

I am writing in response to your letter of September 7, 2016 addressed to my colleague, Ms. Jennifer Benedict, Public Works Manager, Eastern Region.

Thank you for writing with regards to the City of London's long-term infrastructure plans, as well as your request for details on the challenges associated with rail rationalization projects. I note that this letter was subsequent to the meeting between City officials, CP, and CN, regarding the same subjects, held on August 23, 2016, in London.

CP fully appreciates the City's desire to conduct proper due diligence in order to understand the future plans of the railways before committing significant infrastructure dollars to various projects as part of its long-term capital infrastructure planning. I can confirm that CP's mainline track that runs through London is a critically important component of our network. Consequently, CP has no plans to reduce our existing infrastructure footprint in London. Our mainline track and yard infrastructure in London will continue to be required in the future for CP to serve the needs of our customers, both in London and across our network, and by extension the needs of the broader Canadian economy that depends on CP to move Canada's goods and commodities to international markets.

Regarding rail rationalization, while CP understands the needs of growing cities, like London, the rationalization of existing rail infrastructure - particularly infrastructure that continues to be central to our rail network - is always a significant, complex, and costly proposition. The challenges should never be underestimated. To list a select few: there are often many different stakeholders involved in these projects; one community's desire to have rail infrastructure removed may be opposed by another community's desire to keep the railway out. The cost of rail relocation projects can often be

prohibitive. Finally, the operational complexity involved often presents challenges that cannot be easily overcome.

Although CP is always willing to participate in open, constructive dialogue with the communities along our network, it is important to understand that CP would evaluate any rail rationalization proposal against a few core principles: (1) the preservation of existing rail capacity that is required to serve the needs of our customers, both now and in the future; (2) the preservation of our ability to continue serving customers in the London area and across our network; (3) the preservation of safety in all aspects of our infrastructure and operations; and finally, (4) the need for infrastructure investments to be guided by a sound business case that can properly justify a Return on Investment. These core principles are necessary for CP's support of any potential rail rationalization project, but they are also essential ingredients for the health of the Canadian economy.

We hope that you will find this information helpful as the City of London considers its future infrastructure investment plans.

If you have any additional questions, please do not hesitate to contact me.

Sincerely,

Nathan Cato

Nathan Cato
Director, Government Affairs

www.cn.ca

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Daniel Salvatore
Directeur – Affairres Publicques Ontario

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February 12, 2018

Ms. Kelly Scherr
The Corporation of the City of London, Managing Director
Environmental & Engineering Services and City Engineer
300 Dufferin Avenue
P.O. Box 5035
London, ON N6A 4L9

Dear Ms. Scherr:

This is further to your letter addressed to Drew Redden on January 23rd, 2018. As you are aware, Drew recently left CN and I have replaced him as Manager, Public Affairs Ontario. Regarding your request for CN's participation in a study where CP freight trains would operate on CN, we offer the following perspective and comments.

The line that runs through the City of London is part of CN's core strategic network linking Eastern Canada with the United-States and therefore maintaining an efficient rail operation over this important trade corridor is of utmost importance – not only for CN, but for the North American economy. Already today, capacity on this corridor is constrained given our current volume of freight trains cohabitating with VIA passenger trains, all on the same infrastructure.

Adding CP freight trains into a capacity-constrained corridor would be an extremely complex and expensive endeavor requiring an enormous amount of capital to upgrade the rail infrastructure and to purchase the required property for additional tracks, not to mention road-rail grade separations that would be justified given a substantial increase in the train count. Overall, this conceptual proposal would ultimately have a detrimental impact on CN's freight operations and competitiveness, and negatively impact the economy.

For the above reasons, we will not be participating in the scoping exercise or in the development of the terms of reference. Please also note that the data you have requested is of a commercially sensitive nature; therefore, we are not in a position to share it.

I trust you will understand our need to protect our freight rail capacity to meet the growing needs of a growing Ontario economy. I very much look forward to working with you and your colleagues at the City of London in the years ahead.

With best regards,

Daniel Salvatore
Manager, Public Affairs Ontario
CN

Tony Marquis
Senior Vice-President
Operations East Region

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Ms. Kelly Scherr
Managing Director, Environmental & Engineering Service
and City Engineer
City of London
P.O. Box 5035
300 Dufferin Avenue
London, ON N6A 4L9

March 1, 2018

Dear Ms. Scherr:

I am responding to your letter inviting Canadian Pacific (CP) to participate in a feasibility study regarding rail relocation in the City of London.

As we have previously noted, CP's mainline track that runs through London is a critically important component of our rail network in North America. CP's existing infrastructure footprint in London meets our present and future needs, as it allows us to provide strong service to our customers and by extension the broader needs of the North American economy. As such, CP sees no business case that would justify relocating our infrastructure elsewhere. Consequently, we have no desire to abandon or relocate any component of our footprint in the London area.

That being said, CP understands London's legitimate need to plan for its future infrastructure requirements and investments. CP is therefore willing to participate in your feasibility study to help the City develop a deeper understanding of the significant cost and complexity involved with any proposal to relocate rail infrastructure. As a condition of CP's participation, London must acknowledge that CP's participation shall be on a "without prejudice" basis as CP has no desire to relocate and will not contribute any funds to either the cost of the feasibility study or any costs associated with a future proposal to relocate our infrastructure in the region. Further, CP will not be required to provide any confidential or proprietary information, and where provided, may impose terms and conditions as CP deems appropriate.

With respect to the initial scoping exercise that you describe, we believe this task is better left to the City, since many aspects of the study may not directly involve railway infrastructure. CP can participate by providing operational expertise to inform the study's analysis.

As requested, CP will contact Mr. Edward Soldo, Director, Roads and Transportation at the City of London, in the coming days to confirm arrangements for our participation in the study.

Sincerely,

Tony Marquis
Senior Vice President, Operations – Eastern Region

c.c. Martin Hayward
City Manager
City of London

Edward Soldo
Director, Roads and Transportation
Engineering and Environmental Services
City of London

Ministry of Transportation

Policy and Planning Division
High Speed Rail Branch
900 Bay Street, 1st Floor, Macdonald Block, Room M1-21
Toronto, Ontario
M7A 2A2
Tel: 416-212-3444
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Ministère des Transports

Division des politiques et de la planification
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Ontario

April 12, 2018

DIV2018-182

Edward Soldo, P. Eng.
Director, Roads and Transportation
300 Dufferin Ave.
P.O. Box 5035
London ON N6A 4L9

Dear Mr. Soldo,

Thank you and for the invitation to participate in scoping a study to consider the current and future railway needs for London. I want to apologize for the delay in responding to your correspondence as there was an administrative error and our response to was not sent. I thank you for your patience and appreciate the opportunity to respond.

The High Speed Rail Planning Branch would be pleased to participate in the scoping of a study that considers how London's Rapid Transit Master Plan might integrate with Ontario's commitment to high speed rail.

Please let Susan Ampleford, Manager, Policy, Coordination and Engagement know the next steps in participation and when we can set up a project initiation meeting. Susan can be reached at: susan.ampleford@ontario.ca or by phone at (416) 212-1899.

Thank you,

Jennifer Graham Harkness, P. Eng.
Executive Director

C. Martin Hayward, City Manager, London
Kelly Scherr, Managing Director, Environmental & Engineering Services and City Engineer, London

Appendix B – TRAINFO

RAILWAY BLOCKAGE INFORMATION SYSTEM

Background

In April 2018, the City installed a TRAINFO railway blockage information system as a pilot program in order to capture the timing and duration of train blockages at three (3) railway crossing locations in London. The TRAINFO system is located on the City's right-of-way and uses patented algorithms to monitor train activity.

Preliminary Data

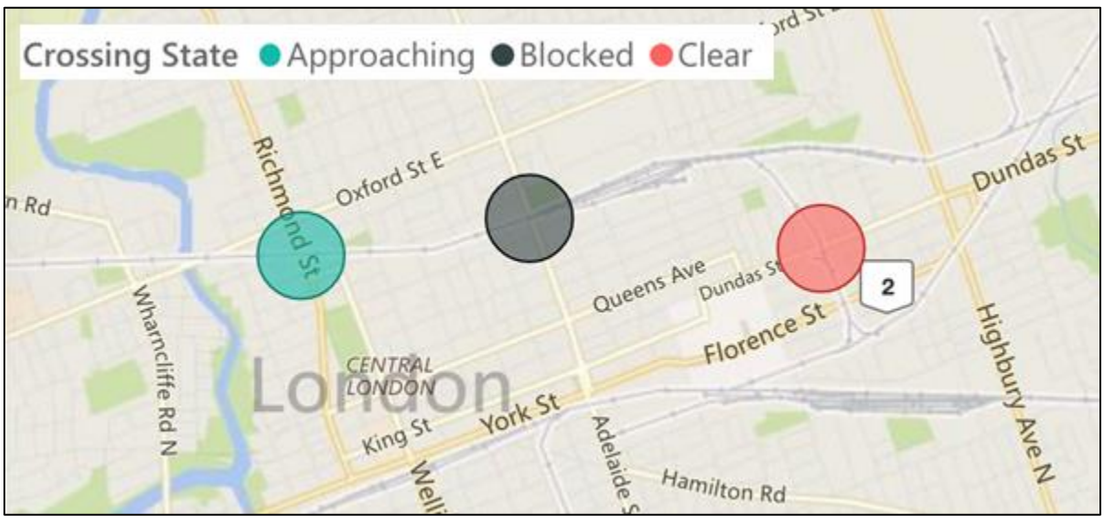
Although the project has just begun, preliminary train blockage data is now available from the TRAINFO system. The following is a summary snapshot of limited weekday (5 day period) train blockage information for the week of April 30, 2018:

- **Richmond Street, south of Piccadilly Street.** This crossing experiences 6-14 train blockages per day (45 total over 5 days) with up to 1-2 per day occurring during peak periods. On average, blockages last approximately 4.5 minutes, but can last up to 14 minutes. While mostly occurring in off-peak or overnight hours, long duration blockages can occur during peak periods.
- **Adelaide Street, north of Central Avenue.** This crossing can experience frequent, short duration blockages due to switching vehicles at the adjacent Canadian Pacific Railway yard in addition to regular railway traffic. This accounts for 11-30 train blockages per day (113 total over 5 days) with 3-10 per day occurring during peak periods, particularly in the morning hours. On average, blockages last approximately 4.25 minutes, but can last up to 22 minutes. Several blockages of 10 minutes or more have been observed during peak periods.
- **Dundas Street, west of Eleanor Street.** This crossing is an auxiliary line, therefore only experiences infrequent, short duration blockages with only 8 crossing events observed during the data period. On average, blockages last 1.75 minutes with the longest duration blockage of fewer than 4 minutes.

Live Web Portal

Once sufficient data has been gathered, the TRAINFO system will be capable of anticipating the likelihood of a train event. TRAINFO uses a three-pronged approach to mitigate congestion. TRAINFO delivers real-time information to a roadside dynamic message sign (DMS) that alerts road users when a crossing is blocked and the amount of delay to expect. TRAINFO integrates its information into mobile apps, such as Waze, to help drivers re-route around blocked crossings if necessary. TRAINFO can adjust traffic signal timing plans before and after a railway crossing blockage event based on real-time train and traffic characteristics to mitigate travel delays.

The City's live TRAINFO portal currently shows whether a crossing location is blocked, clear, or has an approaching train, but can be expanded upon to indicate when a train blockage is predicted and illustrate the number of trains per day.



Expand local discussions on railway relocation as the result of Toronto Star article of May 12, 2018.
In light of government action to relocate railway line in Quebec opens the door for a wider discussion.
This is supported by the following quote from CN rail official “We don't want to be in the city any more than you don't want us in the city".
Taking the politics out of the discussion and decision made in London that anything to do with rapid transit has to be linked to downtown it is time to expand the discussion. This involves consideration of relocating rail service out of the city core. In examining this option Londoners need to look at what is best for the overall improved movement of all Londoners in their transportation choices. The key to expanding the discussion is to identify that better transportation consists of an integration of services maximizing flexibility and minimizing separation and fixed infrastructure.
The current plan doesn't create better service! What it does is add two more routes; replacing current routes along Wellington, Richmond, Oxford and Dundas streets within fixed corridors. Then forcing 23 million current riders to fixate on these routes by introducing first and last mile thus causing longer travel time and greater transferring.
Relocating rails lines is predicated on the below stated process; better service to all southwestern area and being completed before London population reaches 550,000 people (40 years).
The plan would be in two phases. Current to 10 years and 10 years to 20 years.
Phase one would see an environmental evaluation of moving trains out of core and moving CP rail to CN lines. Phase two would see CN lines move to south area; around core by 401 through a link between the existing links on each side of the city. This would allow the current lines to become transit corridors going through core in Richmond Row and Yorke St. railway station corridor. The route could also accommodate "Go Transit" when the need was justified.
Some of the benefits could be as follows:
Greater flexibility in transportation services for all wards and all Londoners.
Elimination of overpasses, segregated lanes and forced travel patterns.
Elimination of making downtown a transit parking lot.
Saving Richmond St., Wellington Rd., Downtown ring road for transit flexibility and Clarence St..
Sharing cost of 200 million by 1/3 formula results in hundreds of millions of dollars being made available to improve all 42 communities in London and surrounding London in an integrated fashion
without forcing design around downtown London.
Avoids expenditure on moving to airport for some major international attraction contrary to reality of population today; noting less than 5% of Londoners travel further than 30 km. to work.
The current rail corridors could provide transit through core across Richmond Row and possible bike lanes.
Greater use of PRT (personal rapid transportation choices).
Elimination of the buzz word "Rapid" which is not the reality Londoners face.
Saves major loss of farm land chasing a vision not met by reality in several decades to come.
Allows Council to spend more time and dollars on current needs including poverty>
Replaces the unanimous decision of 2015; to go after billion dollar LRT, with a plan to provide an integrated; flexible and reliable transportation choices for all Londoners.
Recommendation:
Council direct this brief to the appropriate discussion group on rail changes; along with generating a full discussion with all parties including our neighbours. Because there is no rush Council pause and generate an open discussion setting aside the politics.

William H. Brock, C.I.M.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE**
SUBJECT:	**ENVIRONMENTAL PROGRAMS ANNUAL OVERVIEW UPDATE**

RECOMMENDATION

That on the recommendation of the Director – Environment, Fleet & Solid Waste:

a) This report **BE RECEIVED** for information; and
b) This report **BE FORWARDED** to the Advisory Committee on the Environment (ACE) for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

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

- Environmental Programs Updates (April 24, 2017 meeting of the Civic Works Committee CWC, Item #8)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of environmental and sustainability programs and projects in its 2015-2019 - Strategic Plan for the City of London (2015 – 2019 Strategic Plan). Specifically, all four Areas of Focus address at one level or another environmental and sustainability matters as follows:

Strengthening Our Community
- Healthy, safe, and accessible city

Building a Sustainable City
- Robust infrastructure
- Convenient and connected mobility choices
- Strong and healthy environment
- Beautiful places and spaces
- Responsible growth

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 information report is to provide Committee and Council with a single report that provides brief overview updates on 13 key programs, projects, and activities within the Environmental Programs Division that:

- indicates how the program or project contributes to Council's Strategic Plan 2015-2019
- highlights a number of the key programs and projects currently under way or in the planning stages
- provides key available data and observations, and
- indicates how the program or project is addressing cost impacts and/or value to customers.

DISCUSSION

The Environmental Programs Division's key focus is on being a central resource for environmental leadership, coordination with other service areas, and being easily accessed by the citizens and businesses of London for many projects and activities dealing primarily with the built environment.

The Division works closely with many Environmental & Engineering Services (EES) divisions as well as staff in Planning; Neighbourhood, Children & Fire Services; and Development & Compliance.

City staff in the Environmental Programs Division apply practical municipal and private sector experience with a focus on air quality, climate change, climate adaptation, energy conservation, active transportation (walking and cycling), transportation demand management, urban watershed management, natural landscaping, community capacity building and community engagement. Within EES, important project/program relationships and synergies exist with such areas as water conservation and wastewater treatment operations.

Some Environmental Programs' responsibilities include:

Community Environmental Action
- Implement community and business outreach and action; partnerships and capacity building
- Administer and evaluate existing environmental programs and initiatives

Environmental Programs Coordination and Management
- Respond to environmental inquiries and manage issues
- Undertake research and policy development
- Coordinate with other City of London divisions, agencies, boards & commissions on environmental and sustainability matters

Corporate Environmental Actions
- Design, implement, monitor and evaluate actions
- Undertake cost/benefit analyses and return on environmental investment

Benchmarking and Public Reporting
- Undertake comparative evaluations, analyses and public reporting on many programs.

KEY PROJECT / PROGRAM UPDATES (*AT A GLANCE*)

Appendix A contains a brief overview summary on the following 13 projects, programs, and initiatives undertaken between April 2017 and the end of March 2018, specifically:

1. Community Energy Action Plan
2. Corporate Energy Conservation and Demand Management Plan
3. Bike (Cycling) Program
4. Business Travel Wise Program
5. Downtown Transportation Alliance
6. Climate Change Adaptation Strategy
7. London Subwatershed Planning
8. Source Water Protection
9. Thames River Clear Water Revival
10. Active & Green Communities
11. London Environmental Network
12. CityGreen Environmental Education and Outreach
13. London Clean & Green

These Environmental Programs activities provide mutually-supporting benefits as outlined in Figure 1, as well as support for major City of London initiatives as outlined in Figure 2. For example, there are strong linkages between climate change mitigation (as addressed by the Community Energy Action Plan) and climate change adaptation (as

addressed by the Climate Change Adaptation Strategy) that could be built upon through a joint community engagement strategy in 2018.

Readers are encouraged to contact any of the following City staff should further details be required:

Jay Stanford	519-661-2489	ext: 5411	jstanfor@london.ca
Jamie Skimming	"	ext: 5204	jskimmin@london.ca
Pat Donnelly	"	ext: 0418	pdonnelly@london.ca
Allison Miller	"	ext: 5389	amiller@london.ca
Tim Conlon (Greg Sandle)	"	ext: 7328	tconlon@london.ca

Figure 1 - Inter-Connections within Key Environmental Program Activities

	Community Energy Action Plan	Corporate Energy CDM Plan	Bike Program	Business Travel Wise Program	Downtown Transportation Alliance	Climate Change Adaptation Strategy	London Subwatershed Planning	Source Water Protection	Thames River Clear Water Revival	Active & Green Communities	London Environmental Network	CityGreen	London Clean & Green
Community Energy Action Plan		✓	✓	✓	✓	✓				✓	✓	✓	✓
Corporate Energy CDM Plan	✓					✓							✓
Bike Program	✓	✓		✓	✓					✓	✓	✓	✓
Business Travel Wise Program	✓		✓		✓					✓	✓	✓	✓
Downtown Transportation Alliance	✓		✓	✓						✓	✓	✓	
Climate Change Adaptation Strategy	✓	✓					✓	✓	✓		✓	✓	
London Subwatershed Planning						✓		✓	✓				✓
Source Water Protection						✓	✓		✓	✓		✓	
Thames River Clear Water Revival						✓	✓	✓					
Active & Green Communities	✓		✓	✓	✓			✓			✓	✓	✓
London Environmental Network	✓		✓	✓	✓	✓				✓		✓	✓
CityGreen	✓		✓	✓	✓	✓		✓		✓	✓		✓
London Clean & Green	✓	✓	✓	✓			✓			✓	✓	✓	

Figure 2 - Connections between Key Environmental Program Activities (Columns) and Major City Initiatives (Rows)

Major City Initiatives	Community Energy Action Plan	Corporate Energy CDM Plan	Bike Program	Business Travel Wise Program	Downtown Transportation Alliance	Climate Change Adaptation Strategy	London Subwatershed Planning	Source Water Protection	Thames River Clear Water Revival	Active & Green Communities	London Environmental Network	CityGreen	London Clean & Green
60% Waste Diversion Action Plan	✓									✓	✓	✓	✓
Active & Safe Routes to School	✓		✓							✓			✓
Bus Rapid Transit	✓		✓	✓	✓							✓	
Cycling Master Plan	✓		✓	✓	✓					✓	✓	✓	✓
Flooding Matters						✓	✓			✓		✓	
Water Conservation & Efficiency	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓
Green and Healthy City Strategy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
London Strengthening Neighbourhoods Strategy	✓		✓		✓			✓		✓	✓	✓	✓
Parks & Recreation Master Plan			✓			✓	✓		✓				✓
Resource Recovery Strategy	✓	✓								✓	✓	✓	
Smart City Strategy	✓	✓	✓	✓	✓	✓				✓	✓		
Stormwater Management						✓	✓	✓	✓	✓		✓	
Urban Forest Strategy	✓					✓	✓	✓		✓	✓	✓	✓

In Appendix A, where possible, estimated annual City expenditures and/or in-kind services from the community and business partners are noted by project. These expenditures do not include City staff time. For in-kind services/funds offered by the community or businesses, the following scale is used:

Annual Community In-kind Hours	Annual Business In-kind Hours or Financial
Minor (less than 49 hours)	Minor (less than 24 hours and/or under $1,000)
Moderate (50 – 99 hours)	Moderate (25 – 49 hours and/or under $5,000)
Major (over 100 hours)	Major (over 50 hours and/or over $5,000)

In a number of the projects, City staff time and expenditure activities are embedded as part of broader services and/or infrastructure requirements; therefore it is not possible to extract reasonable estimates from overall project or program costs.

City staff are always grateful to work with the community, businesses and institutions and fully recognized the importance of doing more collaborative work.

ACKNOWLEDGEMENTS

This report was prepared with assistance from Allison Miller, Transportation Demand Management Coordinator, and Greg Sandle/Tim Conlon, Environmental Outreach Coordinator.

PREPARED BY:	**PREPARED BY:**
PATRICK DONNELLY, M.Sc., RPP MANAGER, URBAN WATERSHED PROGRAM	**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**

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Appendix A Environmental Programs - Key Projects and Initiatives (*At a Glance*)

c Lynne Livingstone, Managing Director, Neighbourhood, Children and Fire Services
John Fleming, Managing Director, Planning and City Planner
George Kotsifas, Managing Director, Development and Compliance Services and Chief Building Official
Edward Soldo, P.Eng., Director, Roads & Transportation
Scott Mathers, P.Eng., Director, Water & Wastewater

APPENDIX A

1. Community Energy Action Plan (CEAP)	
Website	City of London – Community Energy Action Plan
Connections to Council's Strategic Plan 2015-2019	Building a Sustainable City Growing Our Economy
Brief Description	The CEAP was adopted by Council in July 2014, and the timeframe for Phase 1 of the plan is 2014-2018. The CEAP's goals are to increase the local economic benefit of sustainable energy use and reduce GHG emissions to 15% below 1990 levels by 2020.
Community Engagement - levels and methods used (or to be used)	Audiences – public, communities, key energy-using sectors Methods – CityGreen is being used to engage the general public at public events, while Active & Green Communities engages Londoners though the community they belong to. Key energy-using sectors are engaged using a mix of workshops and other direct one-on-one discussions.
Project/Program partners	London Hydro, Union Gas, Project Neutral, London Environmental Network, Western University, QUEST Canada, Federation of Canadian Municipalities, Clean Air Partnership, other key energy stakeholders
Value to Customers	In 2016, London spent about $1.4 billion on energy, and almost 90 percent of this money left London. Since 2010, Londoners have avoided around $400 million in energy costs through energy efficiency and conservation.
Estimated City expenditures and/or in-kind	City of London = $40,000 Business Partners = Major Community Partners = Moderate
Key Results for April 2017 – March 2018	Completed the Active & Green Home Check-up (home energy conservation) and MyCarma London (vehicle fuel efficiency education) pilot projects. Both pilots showed potential for future program activities. Supported the London Environmental Network (and its volunteers from the business community) in its development of a target-based sustainability program for businesses in London. Delivered a mid-term review of the CEAP with input from key energy stakeholders. (see website for details) Developed innovative new public engagement videos to celebrate mid-term CEAP progress. Worked with Project Neutral to support their major upgrade of their carbon footprint calculator used for both CityGreen and Active & Green Communities activities. Completed the London phase of the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development. As part of the multi-municipality Community Energy Knowledge & Action Partnership, worked with Western University to establish research topic for the London component of the project. *continued*

1. Community Energy Action Plan (CEAP)	
Key Results (continued)	Successfully applied to participate in QUEST Canada's Community Energy Scorecard pilot project for use in development of the 2019-2022 CEAP. Continued to follow and support activities undertaken by the Clean Air Partnership for a province-wide pilot program for using Local Improvement Charges (LICs) for energy retrofits. Worked in partnership with Natural Resources Canada and the London Home Builders' Association (LHBA) be the pilot community for the London Energy Efficiency Partnership (LEEP) for Retrofits energy efficiency technology demonstrations.
Next Steps	Develop and implement an integrated framework for community engagement for both climate change mitigation and adaptation to help guide the development of both the 2019-2022 CEAP and Climate Change Adaptation Strategy. Incorporate the learnings from QUEST Canada's Community Energy Scorecard pilot project in to the development of the 2019-2022 CEAP. Continue to support the development of a target-based sustainability program for businesses in London. Support Western's research into social behavior associated with personal vehicles choices and options for municipalities to encourage more-sustainable choices. Support the Clean Air Partnership application to the Green Ontario (GreenON) Fund incentive programs for the province-wide LIC pilot program. Identify opportunities to build upon outcome from LEEP for Retrofits workshops Work with Planning staff to develop the CEAP aspects of creating a "Culture of Resiliency" to support implementation of the Green and Healthy City component of The London Plan.
Further information	Ontario's Climate Change Strategy Canada's Action on Climate Change Project Neutral
Next CWC reports	General framework for community engagement for climate change mitigation and adaptation (Summer 2018) 2017 community energy and greenhouse gas emissions inventory (Summer 2018) 2014-2018 Community Energy Action Plan final report, including stakeholder actions (Winter 2019)

2. Corporate Energy Conservation and Demand Management (CDM) Plan	
Website	City of London – Corporate Energy Management Program
Connections to Council's Strategic Plan 2015-2019	Building a Sustainable City Leading in Public Service
Brief Description	The Corporate Energy Conservation and Demand Management (CDM) Plan is a mandatory requirement of the Ontario *Green Energy Act.* The plan has a timeframe of five years (2014-2018), and was adopted by Council in July 2014. The plan's goal is to reduce corporate energy use 10 percent from 2014 levels by 2020, which requires a service delivery energy efficiency (energy used per Londoner) improvement of 15 percent to accommodate London's growth.
Staff Engagement - levels and methods used (or to be used)	Audiences – employees, key energy-using service areas Methods – different employee engagement activities have been tested under the *It's Within Reach* program; management from energy-using service areas were consulted in person to determine actions to include in the Plan
Project/Program partners	London Hydro and Union Gas (incentives); Federation of Canadian Municipalities Green Municipal Fund (GMF); Ontario Municipal GHG Challenge Fund
Value to Customers	In 2016, the Corporation spent about $21 million on energy and this is forecast to increase to $26 million by 2020 if energy efficiency remains unchanged. If the plan's goals are met, the Corporation's annual energy costs will be around $4 million lower than forecast and the Corporation's annual energy-related greenhouse gas emissions will be around 3,900 tonnes CO_{2e} lower ear compared to 'business-as-usual'.
Estimated City expenditures and/or in-kind	City of London = $5,000 (excluding project capital costs) Business Partners = Major Community Partners = None
Key Results for April 2017 – March 2018	Corporate energy use has decreased by 7 percent from 2014 levels, which has avoided over $2 million per year in energy costs. Reported the 2016 corporate energy and greenhouse gas emissions inventory. (see website for details) Reported on the status of implementation of the Corporate Energy CDM Plan. (see website for details) Applied for Ontario Municipal GHG Challenge Fund financing for five projects – Renewable Natural Gas (RNG) production, fleet compressed natural gas (CNG) infrastructure, building energy retrofits, wastewater energy retrofits, and bike share. Successful with two applications - fleet CNG infrastructure and bike share. Successful application to Union Gas RNG request for expressions of interest for upgrading landfill gas to RNG for pipeline injection. Applied to Ontario's Workplace Electric Vehicle Charging Incentive Program – on the waiting list due to high demand. *continued*

2. Corporate Energy Conservation and Demand Management (CDM) Plan	
Next Steps	Outcome of Union Gas RNG request for proposals is expected after the provincial election. Identify opportunities for consideration in the second round of Ontario Municipal GHG Challenge Fund applications due July 13, 2018. Develop space heater and temperature settings policy in liaison with Facilities division for City employee locations. Test the use of Environmental Champions in key facilities to promote energy/environmental activities in these work areas. Work in coordination with Greenway PCP staff and London Hydro to implement the Organic Rankine Cycle engine project. Increase Culture of Conservation (employee) activities for employee engagement.
Further information	Ontario Ministry of Energy - Conservation for Public Agencies
Next CWC report	2017 corporate energy consumption report (Summer 2018)

3. Bike (Cycling) Program	
Websites	City of London - Cycling (new content under development)
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City Leading in Public Service
Brief Description	Cycling is a key component of the City of London's Transportation Demand Management (TDM) program – specifically as part of Active Transportation promotion. Cycling promotion and awareness activities are closely tied to Transportation Planning & Design, Environmental & Parks Planning, Roads Operations, and Parks & Recreation Operations. Current cycling activities are closely tied to the London ON Bikes Cycling Master Plan (2016). Cycling infrastructure and relationships to Bus Rapid Transit are key to overall mobility in the city.
Community Engagement - levels and methods used (or to be used)	Audiences – Public, community groups, and employees Methods – General promotion, social media, one-on-one meetings, presentations, and special events
Project/Program partners	Cycling Advisory Committee, Middlesex-London Health Unit, Thames Region Ecological Association, London Cycle Link, local employers, Federal Public Transit Infrastructure Fund (PTIF), Ontario Municipal GHG Challenge Fund
Value to Customers	These activities make it easier for more Londoners to ride a bicycle for transportation. Better end-of-trip facilities are also being addressed, with secure bike parking and working with employers.
Estimated City expenditures and/or in-kind	City of London = $25,000 Business Partners = Moderate Community Partners = Major
Key Results for April 2017 – March 2018	City and partners hosted the inaugural London Celebrates Cycling 5 day event in June 2017 working with: • Boler Mountain • Byron Community Organization • Fanshawe College • Go Green Go Dutch Go Bike • London Cycle Link • London Clean & Green • Middlesex London Health Unit • Urban League As part of the LCC, the City held its first formalized bike ride called the Canada 150 bike ride (June 24th). That event drew about 200 participants for rides of 5 km, 10 km, 30 km and 75 km. Successful application to the Ontario Municipal GHG Challenge Fund financing for establishing a bike share program in London. *continued*

3. Bike (Cycling) Program	
Key Results for April 2017 – March 2018 (continued)	The use of bike corrals (installed in one on-street vehicle parking space that provides parking for up to 14 bikes) has proven to be popular, and developed plans for expanded deployment. In response to public demand for bike parking for winter cyclists, worked with one Old East business to test the use of two bike racks for the winter season. Established a new cycling project collaboration with Fanshawe College to update London's Bike & Walk Map and create new ways to access this popular information. Students were also instrumental in creating easy-to-read maps for the inaugural Celebrate 150 Bike Rides in June, 2017. The Active & Safe Routes to School Committee was successful in an application to the Ontario Active School Travel Fund, in part to pilot providing well-designed bike racks to some School Travel Planning schools. Environmental Programs staff has been involved in determining style of rack, costs, and how to award to schools. Explored cycling research opportunities with Western University (which continues to move ahead).
Next Steps	Phase One (business case development) will be undertaken for the bike share system. Secure downtown bike parking will be implemented using PTIF and City funding. Neighbourhood Bike Parking Concepts Study will be undertaken. New, redesigned Bike Map and Walk Map are underway in partnership with Fanshawe College. Also creating maps for the London Celebrates Cycling Bike Rides in June 2018. Cycling content on the City website is being updated and consolidated to make it easier to find local information online. Planning is underway for the 2018 London Celebrates Cycling event in June. Two more bike corrals are in production. A fourth bike fix-it station will be installed at City Hall, allowing cyclists in the downtown area to make quick repairs to their bike. Plan and/or implement other outreach components of the Cycling Master Plan.
Further information	none
Next CWC report	Bike Share business case (Winter 2019) Other bike program details to be included in Environmental Programs update report (Spring 2019)

4. Business Travel Wise Program	
Website	Regional Rideshare
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City Growing Our Economy
Brief Description	The purpose of this program is to engage local employers in implementing programs to encourage their employees to carpool, take transit, walk or cycle to and from work. The program also facilitates more efficient work-related travel.
Community Engagement - levels and methods used (or to be used)	Audiences – London employers and public Methods – London employers will be engaged through the Business Travel Wise Program, targeted invitations, and general promotion. The general public will be engaged through social media, posters, billboards, etc.
Project/Program partners	Several existing employers; Pathway Intelligence (the Regional Rideshare carpool-matching web service provider), neighbouring municipalities, SustainMobility
Value to Customers	These activities make it easier for more Londoners to use options other than driving alone for commuting. Better end-of-trip facilities at many workplaces, which is of value to employees and customers.
Estimated City expenditures and/or in-kind	City of London = $10,000 Business Partners = Moderate Community Partners = Unknown
Key Results for April 2017 – March 2018	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. The project builds on a successful employer engagement model in the GTA and aims to expand this province-wide. It also builds on London and surrounding communities' carpool promotion, primarily through the Regional Rideshare website. The partnership has expanded and currently includes: the counties of Huron, Middlesex, Oxford and Perth, the Cities of London, St. Thomas and Stratford, and the Town of St. Marys. Since expanding into surrounding communities, over 2,000 people have registered on Regional Rideshare, and of those over 800 are active and about 130 carpools have been formed.
Next Steps	Expand citywide promotion to employers & Londoners. Regional Rideshare will be incorporated into upcoming work around establishing a transportation management association for downtown London.
Further information	SustainMobility
Next CWC report	Next Environmental Programs update report (Spring 2019)

5. Downtown Transportation Alliance (London's first Transportation Management Association)	
Website	None
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City Growing Our Economy Leading in Public Service
Brief Description	A Transportation Management Association (TMA) is a non-profit, member-controlled organization that provides transportation services in a particular area, such as a commercial district, mall, or industrial park. They are generally public-private partnerships, consisting primarily of area businesses with local government support. They are usually more cost effective than programs managed by individual businesses. TMAs allow businesses to provide commuter option services for their employees that encourage more efficient use of transportation and parking resources.
Community Engagement - levels and methods to be used (or to be used)	Audiences – downtown London employers and their employees. May also include downtown residents. Methods – London employers will be engaged through targeted invitations, Rapid Transit construction updates, and general promotion. Residents will be engaged through social media, posters, meetings
Project/Program partners	Downtown employers; Downtown London BIA; Old East Village BIA; central London neighbourhood associations (People of Downtown, SoHo, Woodfield)
Value to Customers	These activities make it easier for more Londoners to use options other than driving alone for commuting. Better end-of-trip facilities at many workplaces, which is of value to employees and customers. Will ease difficulties as the Rapid Transit system is built through the downtown.
Estimated City expenditures and/or in-kind	This $150,000 project (estimated) has 50% funding through the Public Transit Infrastructure Fund (PTIF). The City's contribution of $75,000 is approved through capital project TS5031 (Transportation Demand Management).
Key Results for April 2017 – March 2018	There are no TMAs in London or the surrounding region. Development of the business and employee engagement processes for the central London business community.
Next Steps	Document existing commuter and transportation situation. Research and provide recommendations on governance models. Define geographic area for the TMA. Research TMA programs and incentives for use in London.
Further information	Smart Commute
Next CWC report	Next Environmental Programs update report (Spring 2019) and Downtown Transportation Alliance business case (Fall 2019)

6. Climate Change Adaptation Strategy	
Website	City of London – Adapting to Climate Change
Connections to Council's Strategic Plan 2015-2019	Building a Sustainable City Leading in Public Service
Brief Description	Background research was completed in 2011 by Western University focusing on water resource infrastructure, modelling and IDF curves update. Climate Change Adaptation Phase 1: Vulnerability Assessment was completed in 2014 as an internal review led by Risk Management Division. It was designed to take action on upcoming capital projects. Climate Change Adaptation Phase 2: Strategy creation and partnership collaborations and implementation. Using synergies with the CEAP Phase 2.
Community Engagement - levels and methods used (or to be used)	Audiences – public, communities, key educational and institutional sectors Methods – CityGreen (Item 12) is being used to engage the general public at public events, while Active & Green Communities (Item 10) engages Londoners though the community they belong to. Key sectors will be engaged using a mix of workshops and other direct one-on-one discussions.
Project/Program partners	School Boards, Middlesex London Health Unit, Conservation Authorities, London businesses, hospitals and educational institutions
Value to Customers	Estimates have been provided that for every $1 spent in adaptation avoids $4 in future costs related to climate change.
Estimated City expenditures and/or in-kind	City of London = ranges with each phase Business Partners = Major Community Partners = Moderate
Key Results for April 2017 – March 2018	Included adaptation concepts into capital projects (e.g. transportation, wastewater and stormwater projects); reviewed other municipal adaptation approaches (e.g., Durham, Vancouver, Toronto, Windsor) for application to London; and continued engagement with research and risk management groups active in adaptation work (Institute of Catastrophic Loss Reduction).
Next Steps	Develop and implement an integrated framework for community engagement for both climate change mitigation and adaptation to help guide the development of both the 2019-2022 CEAP and Climate Change Adaptation Strategy. Work with London's large employers including hospitals and educational institutions to research local adaptation applications. Work with Planning staff to develop the Strategy with aspects of creating a "Culture of Resiliency" to support implementation of the Green and Healthy City component of The London Plan.
Further information	See website above
Next CWC report	General framework for community engagement for climate change mitigation and adaptation (Summer 2018)

7. London Subwatershed Planning	
Website	City of London – Creeks and Watersheds
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City
Brief Description	London is divided into 17 subwatersheds categorized by their main watershed (Thames River or Kettle Creek) and by the characteristics of the urban drainage pattern (e.g., creeks and streams) in the corresponding neighbourhoods. Program delivery is tailored to the subwatershed issues, the infrastructure condition, and the community interest. The implementation of plans, updates, and strategies respond to each areas' unique characteristics. (e.g., the Coves Plan focused primarily on public access and water quality) High profile projects such as the 2015 London Community Foundation "Back to the River" project (a design competition for 5 km of the downtown riverfront) enabled subwatershed planning principles to be incorporated. This initiative continues in 2018 with on-going discussions related to sustainability. The watershed perspective is embodied in the Thames River Clear Water Revival initiative providing engagement and implementation opportunities.
Community Engagement – levels and methods used (or to be used)	Audiences – public, community groups, neighbourhoods, schools Methods – direct delivery of materials, briefings, presentations, workshops, webpage, videos, social media interaction (Facebook and Twitter), workshops, community-led events
Project/Program partners	Upper Thames River, Lower Thames Valley, and Kettle Creek Conservation Authorities; Others are numerous and varied (e.g., Thames River Rally, Thames River Paddling Routes).
Value to Customers	These initiatives provide environmental awareness, community building opportunities, and activities designed for environmental action. City infrastructure, specifically related to stormwater and flooding are wisely managed through these processes. Community implementation opportunities and environmental stewardship lead to stronger neighbourhoods and improved environmental conditions.
Estimated City expenditures and/or in-kind	City of London = No discrete budget - rather is contained as part of three water/wastewater infrastructure budgets Business Partners = Minor Community Partners = Major *continued*

7. London Subwatershed Planning	
Key Results for April 2017 – March 2018	The Friends of the Coves Subwatershed Inc. continue to fundraise and create access to the Environmentally Significant Area via trail development. Elmwood Gateway has officially opened as a trail head and gazebo for the associated trails. The Silver Creek – East Branch that drains to the Coves, was awarded funds for a natural channel design project from the Ontario Trillium Foundation ($150,000) and is now awaiting implementation funds. City of London Fish & Paddle Guide was created by Fanshawe Design students as an awareness and promotion guide for the river. The project steered by the London Urban Fishing Pilot Project had sponsors including 'Back to the River', fishing and paddling clubs as well as fishing tackle and paddling commercial businesses. Printed copies are available at tourism outlets and are available online. One River Municipal Class Environmental Assessment proceeded through Stage 1 determining that Springbank Dam will not be repaired. Stage 2 will now provide direction on options for the dam, management of the adjacent river shoreline and park improvements at The Forks.
Next Steps	Continue to guide subwatershed plans, updates and strategies as per direction contained in The London Plan. Assist the Stormwater Engineering Service Area with Master Drainage Plans / Dingman Creek Subwatershed Pilot Projects / One River EA. Assist with the creation of London's first Thames River Festival (name to be confirmed) to be hosted at the Forks & Museum tentatively scheduled for the fall.
Further information	Friends of the Coves Upper Thames River Conservation Authority Lower Thames River Conservation Authority Kettle Creek Conservation Authority
Next CWC report	Update reports by individual EES project managers are planned for Spring and Summer 2018

8. Source Water Protection Program	
Website	Thames - Sydenham & Region Drinking Water Source Protection Lake Erie Source Protection Region Ausable Bayfield Maitland Valley Source Protection Region
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City
Brief Description	Source Water Protection (SWP) - London maintains two surface water intakes to the Great Lakes via our Regional Water Supply System and local back-up wells that draw groundwater for emergency situations. Using provincial government funding, we are ensuring the safety of municipal drinking water by managing water at the source, and working to ensure the long-term protection of local groundwater aquifers and water quality. Given our regional interests in water supply and our location in two watersheds (Thames River and Kettle Creek), we are partners in two Regional Source Water initiatives (Thames-Sydenham Region and Lake Erie Region) and maintain an interest in a third region (Ausable Bayfield Maitland Valley).
Community Engagement - levels and methods used (or to be used)	Audiences – public, communities, businesses, neighbourhoods Methods – direct delivery of materials, briefings, presentations, workshops, webpage, social media interaction (Facebook and Twitter), workshops, community-led events, NGO-led seminars/workshops
Project/Program partners	SWP Steering Committee (15 members in total with London maintaining a representative for 11 years during plan creation. Middlesex County will now provide a member representing both their interests and London during the implementation stage). Thames Sydenham Region has 3 First Nation representatives covering the interests of 8 First Nations; Upper Thames River, Lower Thames Valley, and Kettle Creek Conservation Authorities
Value to Customers	Water stewardship is the key message. This program promotes water quality in general, and specifically municipal drinking water supplies for London and surrounding watershed communities who share the Regional Water Supply infrastructure.
Estimated City expenditures and/or in-kind	City of London = $33,000 for Risk Management Services Business Partners = Major Community Partners = Minor
Key Results for April 2017 – March 2018	Previous reports to Council have documented the stages of the work leading up to the completion of the Plan including technical and assessment work (or the "scientific" work) for the two standby well fields. Policies have been prepared for the Region including London, and the Plan was approved in 2016. Implementation is now in process utilizing Risk Management expertise at the Upper Thames River CA and education and awareness programs at the Ministry of the Environment & Climate Change. *continued*

8. Source Water Protection Program	
Next Steps	Implementation by municipalities using land use planning tools (e.g., The London Plan) and risk management expertise. London's back-up emergency wells are scheduled to be decommissioned in 2018 thereby reducing the SWP implementation requirements.
Further information	Refer to the websites listed above as well as a proposed May 5 2018 CWC report regarding Steering Committee membership.
Next CWC report	Update reports are planned by Water Engineering for Fall 2018 to document the back-up, emergency well decommissioning process.

9. Thames River Clear Water Revival Initiative	
Website	Thames River Clear Water Revival
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City Growing Our Economy
Brief Description	Thames River Clear Water Revival (CWR) is a collaborative stewardship initiative to create a water management plan for the entire Thames River from headwaters to the outlet into Lake St. Clair. The previous plan for this watershed was completed in 1975. London benefits from the existence of the Thames River flowing through the city for a whole host of reasons including environmental, social, and economic reasons. London is the largest municipality by geographic size and population in the Thames watershed and therefore a logical municipal leader for this effort. Using federal and provincial government funding focused on water quality in the Great Lakes, we are working in conjunction with our watershed partners to ensure the long-term protection and enhancement of the Thames River water quality. Considerable interest by First Nations has resulted in four communities being actively represented on the Steering Committee.
Community Engagement - levels and methods used (or to be used)	Audiences – public, communities, businesses, neighbourhoods Methods – Direct delivery of materials, briefings, presentations, workshops, webpage, social media interaction (Facebook and Twitter), workshops, community-led events, NGO-led seminars/workshops
Project/Program partners	CWR involves a Steering Committee composed of staff from Environment Canada, three provincial ministries, two Conservation Authorities, four First Nations, and City of London. City staff currently co-chair the Committee.
Value to Customers	Water stewardship is the key message of this initiative. This program safeguards water quality in general, and specifically river water quality for London and surrounding watershed communities.
Estimated City expenditures and/or in-kind	City of London = $25,000 for general project support Business Partners = Major Community Partners = Minor
Key Results for April 2017 – March 2018	The multi-partnership Steering Committee created to represent the wide interest in the initiative is now assisting in informing the proposed Domestic Action Plan for Lake Erie as the Thames River is an identified source of Phosphorus. Representation on the committee remains constant including federal, provincial, First Nations, two CAs and the City. *continued*

9. Thames River Clear Water Revival Initiative	
Key Results for April 2017 – March 2018 (continued)	The project manager continues to direct the work of the group and is managing the Water Management Plan creation, and the website that helps to communicate the initiative to the wider public. Western University research housed at the Adelaide Pollution Control Plant, has capitalized on the initiative to attract water quality funding for phosphorus reduction in our waterways. First Nations engagement has increased given the ability of the communities to mobilize interest with their youth.
Next Steps	Water Management Plan scheduled for completion in Fall 2018
Further information	See website above and previous CWC report April 17 2018.
Next CWC report	Scheduled in Fall 2018 by Environmental Programs after completion of the Water Management Plan.

10. Active & Green Communities	
Websites	City of London – Active & Green Communities
Connections to Council's Strategic Plan 2015-2019	Building a Sustainable City Strengthening Our Community
Brief Description	A community engagement pilot project addressing concerns about our environment, health, household finances, and community wellbeing. Two-way exchange of ideas between participating communities and the City (and its partners). Provides simple and convenient access to programs and information from the City of London and partners. Provides "test markets" for small-scale pilot projects to test new tools and ideas.
Community Engagement - levels and methods used (or to be used)	Audiences – public, communities, workplaces (new for 2018), non-profit organizations Methods – community champions, community meetings & events, informal one-on-one discussions, web-based tools (Active & Green Calculator provided by Project Neutral)
Project/Program partners	Project Neutral, London Hydro, Union Gas, Upper Thames River Conservation Authority, Middlesex-London Health Unit, Ontario Ministry of Energy
Value to Customers	Residents within participating communities get quicker access to City and partner programs. City staff can test new program ideas at a small scale to reduce the risk associated with trying new ideas.
Estimated City expenditures and/or in-kind	City of London = $20,000 Business Partners = Moderate Community Partners = Major
Key Results for April 2017 – March 2018	City-led projects (Active & Green Home Check-Ups, MyCarma London) implemented in Byron, Kensington Village, Old East, SoHo, and Willingdon. Feedback obtained on the Active & Green Calculator being incorporated by Project Neutral for their new, completely-redesigned carbon/cost footprint tool. Working with neighbourhood associations has had mixed results, depending upon the alignment of Active & Green Communities, the priority issues for those neighbourhoods, and their capacity to take on additional projects. Workplace-based activities (e.g., MyCarma London) proven to be cost-effective for engaging Londoners. Worked with Big Bike Giveaway (cycling promotion/awareness), Urban Roots London (urban agriculture), London Electric Vehicle Association (LEVA) and We Are Building Better (home energy retrofits) to explore joint interest in community engagement. Promoted Active & Green Communities engagement approaches to London Environmental Network through collaboration sessions and information exchanges. *continued*

10. Active & Green Communities	
Next Steps	Explore additional approach for Active & Green Communities, such as, at a minimum, commitment from communities to include community-specific environmental topics within their communication tools (e.g., newsletter, social media, or website). Expand Active & Green Communities to engage directly with additional local environmental non-profits (e.g., London Electric Vehicle Association) both for shared interest in engaging Londoners as well as a "community" of people. Develop community-scale environmental project ideas for inclusion within the Strengthening Neighbourhood Strategy's Neighbourhood Decision Making's Ideas Bank as well as Active & Green Communities. Develop and test engaging Londoners through workplaces (i.e., Active & Green Workplaces), such as Lunch & Learn events as well as existing employer-led events. Work with Project Neutral to utilize their new, completely-redesigned carbon/cost footprint tool within Active & Green Communities. Discussions are underway with several community groups specializing in agriculture, cycling, energy conservation and mobility.
Further information	Program website noted above and NeighbourGood London
Next CWC report	Next Environmental Programs update report (Spring 2019)

11. London Environmental Network	
Website	London Environmental Network
Connections to Council's Strategic Plan 2015-2019	Building a Sustainable City Strengthening Our Community Leading in Public Service
Brief Description	The London Environmental Network (LEN) is an environmental non-government organization (NGO) that builds strong, stable & resilient organizations so they can be more effective at creating positive change over the long term. It also acts as a hub for Londoners to learn about environmental efforts in our city and how they can get involved. The City of London has a seat on the Steering Committee.
Community Engagement - levels and methods used (or to be used)	Audiences – public, community groups, neighbourhoods, schools Methods – direct delivery of materials, presentations, workshops, webpage, videos, social media interaction (Facebook and Twitter), workshops, community-led events, social events (Green Drinks), NGO-led seminars/workshops
Project/Program partners	LEN has grown to 45 local and regional members with direct members, volunteers and participants of over 10,000 people.
Value to Customers	Facilitate collaboration between environmental organizations. Provide training and shared resources to make groups stronger and more effective. Empower member organizations to communicate their stories better and become more effective at making change. Be a central source for Londoners to learn about environmental groups, events and activities. Recruit volunteers and supporters for member organizations.
Estimated City expenditures and/or in-kind	City of London = $5,000 (not including City Community Grant) Business Partners = Major Community Partners = Major
Key Results for April 2017 – March 2018	LEN has been working with Green Economy Canada (formerly Sustainability CoLab) alongside volunteers (with experience from Green Economy North in Sudbury, Sustainable Waterloo Region, and Sustainable Hamilton-Burlington) to launch a target-based sustainability program for businesses. LEN has over 2,100 followers on social media and e-newsletters and promoted almost 290 events in 2017. LEN has seen growing attendance with the re-launched Green Drinks events, and has introduced event fees for cost recovery. Over 200 people attended the Resilient Cities Conference in November 2017.
Next Steps	Continue the development process for launching the target-based sustainability program for businesses. Apply for not-for-profit status and form a Board of Directors
Further information	London Environmental Network
Next CWC report	Next Environmental Programs update report (Spring 2019)

12. CityGreen - Enhancing Environmental Outreach and Strengthening Community Capacity	
Website	City of London CityGreen
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City Leading in Public Service
Brief Description	CityGreen is an environmentally focused display that delivers a key message – Working Together for Sustainability. All environmental areas (built environment, natural environment) of the City of London engage with information and staff depending on the event. The goal is to be a one-stop-shop for environmental information, knowledge, hands-on-displays, and how to take action in your own community. CityGreen assists other City service areas with major community outreach activities (e.g., Bus Rapid Transit, London ON Bikes) and assist community groups with gaining additional exposure. CityGreen is also the brand name for the London Hydro bill insert that advertises London's environmental programs and special events. CityGreen operates throughout the year at major indoor and outdoor events in London.
Community Engagement - levels and methods used (or to be used)	Audiences – public, community groups, businesses, business associations, schools, neighbourhoods Methods – interactive displays of various sizes at existing community events (from small tabletop displays to over 3000 square foot display at the Lifestyle Home Show), outdoor festivals (mobile display trailer and tents)
Project/Program partners	City of London service areas with environmentally-related programs and activities (Environmental & Engineering Services, Planning, Neighbourhood, Children & Fire Services and Development & Compliance)
Value to Customers	Through the use of eye-catching, easy-to-understand and interactive engagement materials, increase the capacity of Londoners of all ages to take action that benefits our environment, their health, and their pocketbook. Participation in existing and new outreach activities with a wide range of communities. (e.g., community associations, arts and cultural institutions, local employers, service clubs, and faith-based organizations)
Estimated City expenditures and/or in-kind	City of London = $30,000 Business Partners = Minor Community Partners = Minor *continued*

12. CityGreen - Enhancing Environmental Outreach and Strengthening Community Capacity

Key Results for April 2017 – March 2018

Londoners are now recognizing CityGreen as being a regular feature at community events. Events attended are listed below. The estimated attendance is for the entire time period that CityGreen booth was staffed. The number of people that visited the CityGreen booth for a discussion, to pick up information and/or or glance at information provided varies by event and will always be less than the estimated attendance:

Event	Estimated Attendance
2017 London Bicycle Expo	250
Anderson Ale Trivia Night	30
Bud Gardens “Green Game”	9,000
Canada 150 Sesquifest	1,000
Carolinian Canada’s Go Wild Grow Wild Expo	3,000
EnviroWestern EnviroWeek	250
Forest of Flavours	500
Gathering on the Green (June and August)	3,000
Grickle Grass Festival	250
Home County Festival (daytime only)	20,000
Inspiration Fest	100
LHBA Lifestyle Home Show	18,000
London Hydro Health Fair	200
London Life Health Fair	300
Neighbourhood Fun Day (Westminster)	500
Resilient Cities Conference	200
Seedy Saturday	500
Social Services London East Open House	50
Sunfest (daytime only)	50,000

New engagement materials designed to improve the experience and create a message that can be more easily remembered.

Obtained commitment from Carolinian Canada to host their regional “Go Wild Grow Wild” Green Expo in London a third year in 2018, including the addition of a new ‘Green Living Zone’ where London’s (built) environmental partners and programs will be highlighted.

Successfully engaged the public and solicited their feedback at the 2018 Lifestyle Home Show (over 1,600 respondents) using a low-cost, popular incentive (desk-side blue boxes).

Rebranded and relaunched the story-telling website, Reduce Impact London, as CityGreen Stories.

Produced 6 issues of the London Hydro bill insert titled “CityGreen” that each included several environmental topics, outlined programs and provided engagement opportunities.

Next Steps

Continue to build upon and improve environmental outreach methods and tools

Further information

City of London – Environmental Initiatives

CityGreen Stories

Next CWC report

Next Environmental Programs update report (Spring 2019)

13. London Clean & Green Program	
Website	London Clean & Green
Connections to Council's Strategic Plan 2015-2019	Strengthening Our Community Building a Sustainable City Leading in Public Service
Brief Description	The program started in 1996 with 30 people on a Saturday morning - it now boasts participation of between 5,000 and 10,000 people over the course of over 2 months. In 2012 the program grew to include both "Clean" and "Green" activities; "cleaning" including litter and graffiti removal and "greening" being the various activities to protect and improve our environment through stewardship. A calendar of events is produced annually to advertise the opportunities in the community (mid-April until late June).
Community Engagement - levels and methods used (or to be used)	Audiences – public, community groups, businesses, business associations, schools Methods - direct delivery of materials, briefings, mass media (print, radio), presentations, webpage, social media interaction (Facebook and Twitter), community-led events
Project/Program partners	Amway, Canada 150 Program, Dillon Consulting, Goodwill Industries, Joe Kools, Labatt Brewery, London Environmental Network, London Heritage Council, London Home Builders' Association, London Public Library, Miller Waste Systems, Million Tree Challenge, NeighbourGood London, ReForest London, Thames Region Ecological Association, TD, Thames River Rally, Thames Talbot Land Trust, Trails Open London, Try Recycling, Upper Thames River Conservation Authority
Value to Customers	The event coordinates activities, advertises events and provides a way for groups to engage in community building. In recent years there has been an increased focus on "cleaning" activities under the banner 12 Days of Cleaning. The goal is to make Londoners and businesses aware that there are numerous locations to drop-off items that may otherwise become litter and garbage. (i.e., a focus on preventing the creation of litter, garbage and illegal dumping).
Estimated City expenditures and/or in-kind	City of London = $30,000 Business Partners = Major Community Partners = Major
Key Results for April 2017 – March 2018	Neighbourhood strengthening, increased awareness of our actions, the condition of our neighbourhoods and how stewardship starts with the individual. The material collected is substantial (18 to 20 tonnes on average) and provides the reminder that waste prevention starts at home and at your place of business. As noted, the London Clean & Green Program is a collaboration between individuals, community groups, businesses and the City of London. The 2018 edition marks 23 years of being in the cleaning and greening business, a significant milestone. *continued*

13. London Clean & Green Program	
Key Results for April 2017 – March 2018 (continued)	Expanded partnership to align with Canada 150 events and the desire to “clean up” London to get ready for the Canada 150 events. Introduced the Earth Day 150 Weekend that combined the 20 Minute London Makeover (Friday), Community-wide Cleanup (Saturday) and Earth Day London (Sunday) and created a Canada 150 Signature event.
Next Steps	London Clean & Green, will continue to look for opportunities to expand the collaborative messaging and increase the number of partners for the 2018 launch in April.
Further information	Consult the website for events, locations and activities
Next CWC report	Next Environmental Programs update report (Spring 2019)

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**JAY STANFORD DIRECTOR, ENVIRONMENT, FLEET, & SOLID WASTE**
SUBJECT	**UPDATES: PROPOSED AMMENDED BLUE BOX PROGRAM PLAN; FOOD AND ORGANIC WASTE FRAMEWORK & POLICY STATEMENT, AND NEXT STEPS**

RECOMMENDATION

That, on the recommendation of the Director of Environment, Fleet and Solid Waste, the following report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

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

- Exercise Renewal Options for Curbside Collection and Material Recovery Facility Operations Contracts (January 9, 2018 meeting of the Civic Works Committee (CWC), Item #3)
- Comments on Environmental Bill of Rights Registry – Proposed Food and Organic Waste Framework (January 9, 2018 meeting of the CWC, Item #8)
- Request for Comments on the Draft Amended Blue Box Program Plan (Prepared by Stewardship Ontario) (January 9, 2018 meeting of the CWC Item #9)
- Updates – Proposed Blue Box Program Plan Amendment and Waste Free Ontario Act Ontario (October 24, 2017 meeting of the CWC, Item #12)
- Comments on Environmental Bill of Rights Registry – Discussion Paper: Addressing Food and Organic Waste in Ontario (July 17, 2017 meeting of the CWC, Item #12)
- Comments on Environmental Bill of Rights Registry – Final Draft Strategy for a Waste Free Ontario - Building the Circular Economy (January 10, 2017 meeting of the CWC, Item #15)
- Comments on Environmental Bill of Rights Registry - Proposed Waste Free Ontario Act and Draft Strategy for a Waste Free Ontario - Building the Circular Economy (February 2, 2016 meeting of the CWC, Item #14)
- Waste Diversion – Update on Examination of Residential Organic Waste (Food Scraps) and Next Steps (April 20, 2015 meeting of the CWC, Item #13)

STRATEGIC PLAN 2015-2019

The following report supports the Strategic Plan in the areas of waste diversion, waste management planning, financing, climate change mitigation and adaptation, and job creation. Specifically, the potential changes to waste management locally and provincially address three of the four Areas of Focus from the Strategic Plan:

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

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

Leading in Public Service
- Proactive Financial Management
- Innovative & supportive organizational practices
- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE

The purpose of this report is to provide Committee and Council with:

- Updates on policy and operational items potentially impacting the Blue Box recycling program including; the draft amended Blue Box Program Plan (draft a-BBPP), the Chinese National Sword Program effecting the global market for commodities recovered from Blue Box recycling programs (identified as an emerging issue during the 2017 year-end process), and contracts for curbside collection of Blue Box materials and the operation of the London Regional Material Recovery Facility (London MRF); and

- An overview and update of the Food and Organic Waste Framework & Policy Statement which were released on April 30, 2018.

CONTEXT

The *Waste-Free Ontario Act* (WFOA) includes both the *Waste Diversion Transition Act 2016* (WDTA) and the *Resource Recovery and Circular Economy Act 2016* (RRCEA).

The MOECC published the final Strategy for a Waste-Free Ontario: Building the Circular Economy (Strategy) in February 2017, a requirement of the *Waste Free Ontario Act, 2016*, which outlines a road map for resource recovery and waste reduction for Ontario. It also:

- sets a vision and goals including interim waste diversion goals for 2020 (30%), 2030 (50%) and 2050 (80%);
- articulates key government actions to support implementation of the vision and goals; and
- identifies performance measures to be used to assess progress towards achieving the vision and goals.

The Strategy focuses on moving Ontario towards a circular economy described as “a system where nothing is wasted and valuable materials destined for landfill are put back into the economy without negative effects on the environment.” This approach – a circular economy – has the potential to reduce greenhouse gas emissions, save and better utilize scarce resources, as well as create jobs and financial opportunities.

Recycling

The WFOA will have a major impact on municipal waste management programs as it makes producers fully responsible for the proper management of their paper products and packaging at the end-of-life through the RRCEA.

Stewardship Ontario (SO) released the Draft a-BBPP for comment on December 19, 2017 and requested comments be provided by January 15, 2018. City staff provided an overview of the draft a-BBPP and provided comments for consideration by Committee and Council to be submitted to SO and the Resource Productivity and Recovery Authority (RPRA) at the January 9th 2018 meeting of Civic Works Committee.

Food and Organic Waste

The Strategy committed the MOECC to develop a Food and Organic Waste Action Plan. The Strategy also proposed that the first policy statement under the RRCEA will focus on food and organic waste.

The Proposed Food and Organic Waste Framework & Policy Statement were posted on the Environmental Bill of Rights (EBR) for review on November 16, 2017 for a 60 day period ending January 15, 2018. City staff provided comments on the Framework for consideration of Committee and Council to be submitted the EBR at the January 9th 2018 meeting of Civic Works Committee. The final Food and Organic Waste Framework & Policy Statement were released on April 30, 2018.

DISCUSSION

This section is divided into 2 parts:

- PART A: Blue Box Recycling Program Status of Updates: Draft a-BBPP, Recovered Materials End Markets, Contracts for Curbside Collection and London MRF Operations

- PART B: Overview and Update of the Final Food and Organic Waste Framework & Policy Statement (Including a Summary of How Previous City of London Comments were Addressed)

PART A Blue Box Recycling Program Status of Updates: Draft a-BBPP, Recovered Materials End Markets, Contracts for Curbside Collection and London MRF Operations

Section 1 - Status of the Draft amended Blue Box Program Plan

On December 19, 2017, SO issued the draft a-BBPP for stakeholder review and comment by January 15, 2018. The City of London provided comments (subject of January 9th 2018 CWC Report, agenda item # 9) along with many municipalities and organizations involved with recycling and waste management. Comments and concerns were substantial.

The goal was for SO to address the comments and make changes prior to submission to the Minister of the Environment & Climate Change for consideration by February 15, 2108. However in considering the detailed submissions it was determined that the gap between the draft a-BBPP and the proposed changes to meet the needs of other stakeholders was too large. SO and RPRA determined that more time was needed to address the issues that were raised. RPRA issued the following statement regarding submission of a-BBPP:

> *"As the Minister directed that the proposal for an amended Blue Box Program Plan be developed collaboratively with municipalities, stewards and affected stakeholders, the Authority is committed to engaging with all parties to support the development of a proposal for an amended Blue Box Program Plan that is consistent with Minister's direction" (February 15, 2018)*

As of May 14, 2018, no revised timeline has been communicated to submit a draft a-BBPP to the Minister of the Environment & Climate Change. Rather SO and RPRA acknowledge that the draft a-BBPP is not complete and requires further stakeholder engagement. Some of the key issues raised regarding the draft a-BBPP are outlined below:

1. A clear path to move to Individual/Full Producer Responsibility has not been provided.

2. An accountable governance model with balanced decision-making has not been provided.

3. There are few programs and processes offered and insufficient details to determine whether or not environmental outcomes will be improved during the transition phase to Individual/Full Production Responsibility.

4. There are many key areas where transparency is weak especially with measurable targets or how they will be measured.

5. A number of concerns have not been adequately addressed such as stranded assets, management of newspapers, and eligible costs for non-transitioned municipalities.

City staff were very engaged in the overall process to develop the draft a-BBPP and will continue to participate in update events if and when they occur. Further, City staff will remain active participants in both the Municipal 3Rs Collaborative (via the Ontario Municipalities of Ontario – AMO) and the Ontario Waste Management Association (OWMA) as they relate to further progress of the draft a-BBPP.

There is also ongoing recognition that the next step might be development of the regulatory framework versus negotiating amendments to the existing BBPP. Compounding the challenge of developing an arrangement that is suitable to all stakeholders is the upcoming Provincial election.

One of the most important impacts to the City of London with respect to the inability of reaching a deal is that City of London recycling program contracts (collection, processing and marketing) are no longer aligned with the dates of the proposed draft a-BBPP. This is addressed in the next section as the City will now be required to prepare a Request for Proposals (RFP) for City services.

Section 2 - Contracts for Curbside Collection of Recyclables and Material Recovery Facility (MRF) Operation

The existing contracts with Miller Waste Systems for curbside collection and London MRF operations expires October 30, 2019. This date includes the use of all extensions that were possible under the existing agreements. In the absence of a timeline for submission of an a-BBPP and final transition to full producer responsibility the City of London will be required to procure new contracts for the curbside collection and London MRF operations services.

City staff are currently in the process of preparing the RFP(s) for these services and plan to report back the results of the process to Committee and Council for approval in December of 2018. Given the timeline uncertainty of the a-BBPP and the eventual transition to full producer responsibility, the RFP(s) will be developed to include appropriate elements (e.g., change of law clauses, transition clauses that allow City of London to move to 100% funding ASAP, etc.) to best manage the possibility of either an a-BBPP or full producer responsibility transition occurring during the term of the new service contracts.

Several other municipalities find themselves in the exact same position as London with their contractual arrangements. City staff are engaging with AMO, the Municipal 3Rs Collaborative, Regional Public Works Commissioners of Ontario (RPWCO) and OWMA as well as canvasing other municipalities to assist in preparing the most appropriate contractual clauses and elements to achieve this goal.

Section 3 - Update on the Status of End Markets for Recovered Materials from the Recycling Program

Recyclables collected from the curbside and multi-residential programs have traditionally been marketed primarily in Ontario (over 85%) with some materials heading into markets in the United States. With the closure of a large newspaper recycling mill in Ontario in late 2016 coupled with some other paper recycling challenges in North America, more materials were being sent to China. By late 2017, more changes were announced due to the Chinese government's implementation of a program called National Sword.

As of January 1, 2018, China no longer allows the import of low-grade postconsumer plastics and unsorted paper. This action is in response to the poor quality of recyclable materials shipped from North America, Australia and Europe, severe impacts to environmental and human health caused by poor recycling infrastructure and China's desire to develop its own domestic markets for recyclable materials. The specifics of the ban are:

1. Ban of all Unsorted Mixed Paper and Mixed Plastics
2. Reduction of Contamination Threshold to 0.3%
3. Suspension of all New License Approvals for Chinese import companies

These changes have created major impacts worldwide as the quantity of available materials is substantially higher than available processing capacity. This is driving material prices down for most paper products and also causing some municipalities to stockpile materials.

In the 2017 year end operating budget monitoring process City staff noted the National Sword program as an emerging issue with a high likelihood to effect the 2018 and 2019 operating budgets. As noted at the time, the program has resulted in significantly

limiting global access to the large Chinese recovered materials markets and has placed significant downward pressure on global recovered material end markets for items recovered through Blue Box recycling programs across North America.

The effects of the National Sword program have deteriorated conditions in global markets further since the 2017 year end operating budget monitoring process was completed. At the time of writing this report, North American access to the Chinese recovered materials markets has been virtually eliminated. This has resulted in other global markets for recovered materials tightening specifications and limiting orders as those markets have become saturated with recovered materials that previously would have been destined for China.

At this time there is no indication or available timeline for the Chinese market to re-open to global recovered material commodities or if it does, to the extent it was previously engaged in large volume purchases. It is likely that current global recovered materials market downturn will persist until additional global receiving/processing capacity is developed which will require an extended period of time.

The materials that are proving the most challenging for London are paper products including newspaper, boxboard and mixed papers.

The table below provides an update to the estimated 2018 operating budget impacts to revenue for recovered materials sold from the MRF as a result of the market down turn.

		Operating Budget Impact - Revenue Loss *(italics represents the estimated total revenue loss which is 50% paid for by industry)*	
		Low ($)	High ($)
2017 Year End Estimate	City Portion	($75,000)	($100,000)
	Total Revenue Loss	*($150,000)*	*($200,000)*
Current Estimate (as of May 14, 2018)	City Portion	($325,000)	($475,000)
	Total Revenue Loss	*($650,000)*	*($950,000)*

Currently, industry pays between 45% and 50% of the cost of recycling; therefore about half of the market losses would be covered. However, the funding formula is based on a three-year rolling average which means that the City losses in one year could take up to three years to be recovered by industry through the annual payments from SO.

As noted during the 2017 year end operating budget monitoring process City staff continue to work with Miller Waste Systems to ensure that recovered materials produced from the London MRF are of a quality required to continue to be marketed. Further, Miller Waste Systems is a well-established service provider that has developed long term relationships with stable end markets which greatly assists the marketability of recovered materials during depressed and changing market conditions.

City staff will provide further updates on this issue as part of the 2018 mid-year operating budget monitoring process.

It is important to recognize that market conditions could change quickly and require different strategies to accommodate different situations. City staff will update Committee and Council as soon as further developments are known.

PART B Overview and Update of the Final Food and Organic Waste Framework & Policy Statement (Including a Summary of How Previous City of London Comments were Addressed)

The MOECC released the Proposed Food and Organic Waste Framework on November 16, 2017 for a 60 day review period ending January 15, 2018 through the EBR Registry. In January 2018, the City of London submitted approximately 45 individual comments to

the EBR covering both the proposed Food and Organic Waste Action Plan and the proposed Food and Organic Waste Policy Statement.

MOECC released the final Food and Organic Waste Framework on April 30, 2018. The Framework consists of two complementary components (Appendix A):

- Food and Organic Waste Action Plan, which outlines strategic commitments to be taken by the province to address food and organic waste.

- Food and Organic Waste Policy Statement under the *Resource Recovery and Circular Economy Act, 2016,* which provides direction to the province, municipalities, producers, Industrial, Commercial and Institutional sector (e.g. retailers, manufacturers, hospitals, schools), the waste management sector and others to further the provincial interest in waste reduction and resource recovery as it relates to food and organic waste. The Policy Statement was issued by the Minister of the Environment and Climate Change, pursuant to Section 11 of the *Resource Recovery and Circular Economy Act, 2016,* on April 30, 2018 and came into effect at that time.

Highlights of the final Framework include:

- Ontario Food Recovery Hierarchy that consists of the following steps in order of importance:

    1. Reduce: prevent or reduce food and organic waste at the source.
    2. Feed People: safely rescue and redirect surplus food before it becomes waste.
    3. Recover Resources: recover food and organic waste to develop end-products for a beneficial use.

- A 70% target for waste reduction and resource recovery of food and organic waste for municipalities and educational institutions and hospitals by 2025.

- A 50% target for waste reduction and resource recovery of food and organic waste for multi-residential buildings and IC&I facilities subject to the Framework by 2025.

- Promotion and education, which includes retail establishments to provide sector-based promotion and education to promote operational best practices that can prevent and reduce food waste.

- All retail shopping establishments, retail shopping complexes, office buildings, restaurants, hotels and motels, and large manufacturing establishments, subject to O. Reg. 103/94 under the *Environmental Protection Act,* that generate 300 kilograms or more of food and organic waste per week shall source separate food and organic waste.

What changed between the proposed and final Framework documents?

A few of the key adjustments or changes to the Framework include:

- Updated guiding principles to recognize the need to promote behaviour change to prevent food from becoming waste (Action Plan, Introduction Section);

- Provided specific timeframes for implementation of policies recognizing the need to allow for sufficient time to meet targets and achieve outcomes (Policy Statement, Part II, Timing for Consistency);

- Clarified direction on targets with regard to applicable materials and management methods (Policy Statement, Policies 2.2 through 2.6);

- Directed owners of multi-unit residential buildings in both southern and northern Ontario to provide collection of food and organic waste and promotion and education to residents in order to ensure equal service levels across the province (Policy Statement, Policies 4.10 through 4.13);

- Amended thresholds for large educational institutions and hospitals from 300 kg to 150 kg of waste generated per week to help ensure that these institutions continue to play a leading role in resource recovery, recognizing that many institutional

establishments already source separate food and organic waste (Policy Statement, Policy 4.18);

- Provided direction to encourage best practices to avoid contamination of collected food and organic waste (Policy Statement, Policy 4.20ii); and

- Several minor administrative changes were also made to improve clarity of the document.

How were the City of London comments addressed during the review process?

A brief assessment is contained in Appendix B. In summary, City staff found that over 45% of the submitted comments were either addressed in one form or another and/or where City of London supported a section, the document has remained unchanged. A little over 40% of the comments were operational in nature and will be addressed through further documentation or actions by MOECC and/or others. Less than 15% do not appear to have been addressed.

Have the potential impacts to London (City of London, residents and businesses) of the Framework changed since the January 2018 staff report?

There are no changes to the potential impacts that were previously identified. The details are presented again in Appendix C.

ACKNOWLEDGEMENTS

This report was prepared with the assistance of Jessica Morris, Solid Waste Planning Coordinator and Wesley Abbott, Project Manager.

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Appendix A Overview of the Final Food and Organic Waste Framework

Appendix B How City of London Comments were Addressed on the Proposed Food and Organic Waste Framework

Appendix C Potential Impacts to London (City of London, residents and businesses) of the Food and Organic Waste Framework

Appendix A

Overview of the Final Food and Organic Waste Framework

The final Framework aims to:

- Reduce the amount of food that becomes waste
- Remove food and organic waste from the disposal stream
- Reduce greenhouse gas emissions that result from food and organic waste
- Support and stimulate end markets that recover the value from food and organic wastes
- Increase accountability of responsible parties
- Improve data on food and organic waste
- Enhance promotion and education regarding food and organic waste

The MOECC indicates that these actions will also support the waste reduction and resource recovery objectives of the Strategy for a Waste Free Ontario and greenhouse gas reduction objectives of Ontario's Climate Change Action Plan.

The Food and Organic Waste Framework has two parts:

Part A: Food and Organic Waste Action Plan (Action Plan)

The Action Plan outlines strategic commitments to be taken by the Province to address food and organic waste. The four commitments and the specific actions identified under each are:

1. Reduce Food Waste
    1. Province to work with partners to develop promotion and education tools to support food waste prevention and reduction
    2. Province to enhance and incorporate waste reduction and resource recovery activities within schools
    3. Province to work with the Government of Canada on preventing food waste
    4. Province to work with partners to support innovative approaches and tools to rescue surplus food
    5. Province to develop food safety guidelines to support the safe donation of surplus food
    6. Province to support research aimed at reducing and recovering food and organic waste
    7. Province to develop data collection mechanisms for measuring progress in waste reduction and resource recovery of food and organic waste

2. Recover Resources from Food and Organic Waste
    8. Province to amend the 3Rs Regulations to include food and organic waste and increase resource recovery across the IC&I sector
    9. Province to ban food and organic waste from ending up in disposal sites
    10. Province to support resource recovery of food and organic waste in multi-unit residential buildings
    11. Province to develop best management practices to support effective use of public waste receptacles

3. Support Resource Recovery Infrastructure
    12. Province to review existing approval processes and requirements for *resource* recovery systems using a modern regulator approach
    13. Province to require standardized training for owners and operators of resource recovery systems that undertake composting and anaerobic digestion
    14. Province to review its D-Series Land Use Compatibility Guidelines to support the development of *resource recovery systems*

continued

4. Promote Beneficial Uses
    15. Province to support healthy soils with strong standards and clear requirements for the use of soil amendments, while protecting the environment and human health
    16. Province to support development of renewable natural gas including consideration for linkages to food and organic waste
    17. Province to support green procurement practices, including the use of products, such as compost and digestate

(Source: MOECC, Food and Organic Waste Framework, April 30, 2018)

Part B: Food and Organic Waste Policy Statement (Policy Statement)

The Policy Statement provides direction to further the provincial interest related to waste reduction and resource recovery of food and organic waste. Eight policies are identified within the final Policy Statement. These policies may be complemented by other future provincial policy statements or municipal policies that support and contribute to waste reduction and resource recovery of food and organic waste. The eight policies are:

1. Ontario Food Recovery Hierarchy
2. Targets
3. Reduce Food Waste
4. Recover Resources from Food and Organic Waste
5. Compostable Products and Packaging
6. Support Resource Recovery Infrastructure
7. Promote Beneficial Uses
8. Implementation and Interpretation

(Source: MOECC, Proposed Food and Organic Waste Framework, April 30, 2018)

Appendix B

How City of London Comments were Addressed on the Proposed Food and Organic Waste Framework

In January 2018, the City of London submitted approximately 45 individual comments to the EBR covering both the proposed Food and Organic Waste Action Plan and the proposed Food and Organic Waste Policy Statement. Listed below is City staff best understanding of how the comment was addressed. Under the table are the 6 comments that we do not believe have been addressed at this point in time and do not appear to be contained in other MOECC studies.

Were City of London's Comments Addressed in the Final Food and Organic Waste Framework & Policy Statement?	Number of Comments in Category	Percentage of Comments Addressed
Yes, Final Framework & Policy Statement reflects London comments	20	45%
No, London comments were operational in nature and MOECC did not include more details on operational matters. It is anticipated that some/all of these matters will be handled in future reports being prepared by MOECC.	19	42%
No, Final Framework & Policy Statement does not reflect London comments (a)	6	13%
	45	100%

(a) Comments not addressed include:

Province to use modern regulator approaches to review existing approval processes and requirements for resource recovery systems

- The Province must demonstrate how challenges of today's processing facilities can be addressed with both today's processing facilities that will take in more materials and with the new processing facilities.

Compostable Products and Packaging

- Significant work is required in this area as there is an increasing number of packaging products that claim to be compostable that are ending up in Blue Box Programs, and creating sorting and processing challenges. These products may appear similar to consumers and result in confusion as to which diversion stream (i.e., organics or Blue Box) they are intended to be managed.
- The MOECC should determine and undertake the appropriate action to limit any potential confusion for consumers on how to manage compostable products and packaging. Without action, processing cost increases and/or product quality issues will occur. Municipalities and organic processors will have very little control over this.

Support Resource Recovery Infrastructure

- "Fostering Timely Approvals", Clause 6.2 says "should". Change to "shall". The future system must not cause more impacts to a community. The same can be said for 6.3 and 6.4, these need to be "shall" not "should".
- 6.11, regarding working with the community, needs to change from "should" to "shall".

Implementation and Interpretation

- 8.4, regarding working with municipalities, needs to change from "should" to "shall". The Province needs to understand that the municipal role in achieving the desired outcomes in the Framework is highly contingent on municipal involvement and support. This has already been demonstrated in Ontario's Blue Box and other waste diversion systems.

Appendix C

Potential Impacts to London (City of London, residents and businesses) of the Food and Organic Waste Framework

The Framework will have impacts on programs operated by the City of London, on residents of London that must take action on food and organic waste, and on businesses in London (e.g., retail shopping establishments and complexes, office buildings, restaurants, hotels and motels, hospitals, educational institutions and manufacturing establishments). In many cases, the impacts should be viewed positively (e.g., reducing food waste and/or creating more resources from food waste is good for the economy). However, in other cases additional costs will occur that may or may not be easily absorbed and may limit the ability to invest in other programs, projects and products. A number of anticipated impacts, positive and/or negative, in the context of London are identified below.

Prioritizing Food Waste Reduction

Both the Action Plan and the Policy Statement prioritize food waste reduction. This is not a surprise as the financial and environmental impacts of food waste are becoming increasingly known and understood. It is estimated that each London household discards an average of $450 to $600 per year of food that could have been avoided. This translates to an amount of $80 to $100 million per year across London's total residential sector. This amount grows even higher when the value of food waste generated from businesses, institutions, etc., is included.

MOECC support to reduce this waste at the source will help Londoners save money, reduce environmental impact (e.g., reduce greenhouse gas generation), reduce the cost of managing food waste as a resource, and avoid this waste going to landfill.

London Council has recently approved 11 Guiding Principles for the Environmental Assessment (EA) for the expansion of the W12A Landfill and the development of the Resource Recovery Strategy including "Make Waste Reduction the First Priority."

Food and Organic Waste Disposal Ban

The Action Plan includes a disposal ban on food and organic waste. In London this would mean that food and organic waste would not be permitted to be landfilled. The Action Plan recognizes the need for phased-in implementation and timelines that will accommodate transition from current disposal systems to resource recovery systems. The Framework provides little information on how a ban would be enforced although it does suggest that the Province has enforcement tools available. Experience in London with bans, both curbside and at the landfill, highlights that bans can be time consuming to enforce, require ongoing education and awareness, and can leave a negative impression on service delivery.

From a messaging perspective, announcing a food and organic waste disposal ban with targets of 70% (single family homes) and 50% (multi-residential homes), as noted in the next section, does pose a challenge.

A disposal ban may drive investment in resource recovery systems in London, creating jobs and supporting innovation. Additionally a disposal ban may also reduce the potential for odour generation at the W12A Landfill as less putrescible waste would be received for disposal.

Targets

The Policy Statement identifies sector specific resource recovery targets. Municipal targets for single family residential properties are based on population size and density and whether or not there is currently a source separation program for food and organic waste in place. The proposed target for a municipality such as London is:

- 70 per cent waste reduction and resource recovery of food and organic waste generated by single-family dwellings by 2025

The Policy Statement proposes a different target for multi-residential buildings in Southern Ontario. It also makes building owners responsible for targets and service delivery, not municipalities. The proposed target for multi-residential buildings is:

- 50 per cent waste reduction and resource recovery of food and organic waste generated at the building by 2025

The proposed targets are required to be achieved through waste reduction and resource recovery efforts such as prevention, rescue of surplus food and resource recovery (e.g., composting or anaerobic digestion) of the following items:

- Food waste
- Organic waste (i.e., food preparation, soiled paper, leaf and yard waste, seasonal outdoor wastes, flowers and houseplants)

Additional resource recovery and waste reduction efforts to achieve the prescribed targets are encouraged but not required for the following items:

- Personal hygiene wastes
- Sanitary products
- Shredded paper
- Additional paper fibre products
- Compostable products and packaging
- Pet food and waste

Committee and Council have previously been provided with cost estimates to implement a source separated Green Bin Program for food and organic waste from single family homes as follows:

- Approximately $4.5 million in annual operating costs which includes weekly organics and recycling collection (the organic portion is $3.8 million), bi-weekly garbage collection, and estimated processing costs; and

- Approximately $12 million in onetime capital costs which includes the net cost of additional collection vehicles, carts and kitchen catchers.

Implementing a program as outlined above is expected to be sufficient for London to achieve the proposed diversion targets. It is estimated that this expenditure will result in diversion between 12,000 and 14,000 tonnes (about 8 to 9% increased diversion) and a reduction in greenhouse gas of between 10,000 tonnes and 11,000 tonnes per year.

The Policy Statement specifies that targets are to be achieved through waste reduction and resource recovery efforts. Municipalities understand waste reduction to include home composting, grasscycling and food waste avoidance. Resource recovery includes leaf and yard waste composting and diversion of food waste through a program such as a green bin program.

City staff are currently preparing details on the costs and benefits of mixed waste processing and diverting organics through this type of processing system.

The estimated current diversion of food and organic waste in London through existing programs is approximately 60% and it includes the quantity of leaf and yard waste that is composted and the estimated quantity of waste reduced through home composting and grasscycling. This 60% accounts for approximately 22% of London's existing overall waste diversion rate of 45%. The proposed target of 70% food and organic waste diverted/reduced is achievable and in line with London's overall 60% diversion goal from landfill by 2022.

Achieving the 50% target in the multi-residential sector, by building, will be much more difficult to achieve as the sector is typically starting at 0% food and organic waste diversion.

Timeline

Overall the timeline of the proposed actions aligns reasonably well with both London's 60% Waste Diversion Action Plan and the development of the Resource Recovery Strategy timelines. Noted below are those Provincial actions of particular interest to London as they support local initiatives to be underway in the same timeframe.

Short term actions - 2018 to 2020:

- Support of actions associated with food waste reduction and rescue of surplus food
- Support development of renewable natural gas with consideration for linkages to food and organic waste

Long term actions - 2022 and beyond:

- Disposal ban on food and organic waste
- Support resource recovery in multi-residential buildings

Curbside Collection

To increase recovery of resources from food and organic waste, the Policy Statement proposes that municipalities, (that do not currently provide collection of source separated food and organic waste) such as London, shall provide curbside collection of food and organic waste. This policy aligns with London's direction to provide this service as it is will be a necessary component in London's 60% Waste Diversion Action Plan.

Multi-Residential Buildings

The proposed Policy Statement requires that multi-residential buildings (not municipalities) provide collection of food and organic waste to their residents. This will impact how London implements a City-wide program. Options may include City provision of a collection service to building owners, or building owners may choose to contract directly to private collection companies. Multi-residential building owners (and not municipalities) are subject to the policy for resource recovery and waste reduction targets.

Mixed Waste Processing

London's 60% Waste Diversion Action Plan will identify and assess the potential roles for mixed waste processing (versus source separation) to reach the waste diversion target of 60% by 2022. The potential role of mixed waste processing will also be identified in the Resource Recovery Strategy which will have a longer timeframe. Mixed waste processing is an alternative to a source separation program (i.e., green bin program) and is currently being examined in other Ontario municipalities as both an alternative and supplement to green bin programs. The City of London is part of a municipal working group sharing knowledge and conducting research into mixed waste processing.

In the case of municipalities such as London, that do not currently provide collection of source separated food and organic waste, the Framework permits consideration of the implementation of alternative programs, such as mixed waste processing.

Residents of London

Impacts to Londoners can be summarized as following:

- In general, the implementation of the Action Plan will have two significant impacts on Londoners: 1) there will be a cost of new diversion and reduction programs to taxpayers, and 2) households will be asked to develop new daily habits for how they manage food waste. There is potential for households to offset the tax dollar increase by adopting routines to save money by reducing food waste. The impact to tax payers may be further offset as a result of changes to Blue Box program funding which will reduce municipal costs for this program.

- Province wide actions and messages that work to reduce food waste will be welcomed by Londoners and have the potential to save money for households. Families and individuals in need of food assistance may benefit from food rescue programs.

- Regarding the potential impact of a city-wide organic diversion program, the extent of the impact on daily routines will depend on the type of program that London adopts. A green bin program requires more effort as households will need to take the time to sort their kitchen organic waste. A mixed waste processing program will have little to no impact on the day-to-day routine of households as they will continue to place food organic waste in the garbage and to take to the curb as they already do.

- A program to divert household organics will be welcomed by many Londoners. Since 2011 when London conducted a green bin pilot project, many citizens have been vocal in their desire to see a City wide program.

- The introduction of new compostable packaging and guidelines for best-before-dates will require an adjustment. On the other hand, consistent Province-wide promotion and education campaigns will reduce confusion and especially as people move from one area of Ontario to another.

Institutional, Commercial & Industrial (IC&I) Sectors

Impacts to the IC&I sectors can be summarized as following:

- They will be required to achieve either 50 per cent or 70 per cent (the nature, size and amount of food and organic waste produced at each establishment determines which target is applicable) waste reduction and resource recovery of food and organic waste by 2025;

- They will be required to develop and implement education programs for both the consumers of their products and industry sector based groups. The education programs are to be aimed at preventing and reducing consumer food waste and promoting industry best practices to prevent and reduce food waste;

- They will be encouraged to identify where food waste occurs in operational practices, undertake food waste audits and implement measures to prevent and reduce food waste (e.g., food rescue); and

- The above noted impacts will require development of new programs, systems and possibly infrastructure which will have financial impacts, however may also create jobs and foster innovation.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**SMART MOVES TRANSPORTATION MASTER PLAN ACCOMPLISHMENTS**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- Civic Works Committee — June 19, 2012— London 2030 Transportation Master Plan
- Civic Works Committee – October 7, 2013 – Transportation Infrastructure Gap
- Strategic Priorities and Policy Committee — June 23, 2014 —Approval of 2014 Development Charges By-Law and DC Background Study.

2015-2019 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by providing a summary of programs that implement and enhance safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists.

BACKGROUND

Purpose

Municipal Council, at its meeting held on March 29th 2018 resolved:

> "the Civic Administration BE REQUESTED to provide an update on the 2030 Smart Moves Transportation Master Plan, including an overview of projects that have been completed so far and projects that are planned for future years."

This report provides Committee and Council with an overview of the Smart Moves initiatives undertaken since the creation of the plan.

Context

The 2030 Transportation Master Plan (TMP) is a long-term transportation strategy focused on improving mobility for residents of the City by providing viable choices through all modes of travel. The Smart Moves Transportation Master Plan was approved by Council in 2012. Smart Moves is a mobility transportation plan that covers all modes of how people and commerce move about the City. It includes a transit focused strategy that uses a Bus Rapid Transit network as the backbone for transit service enhancement, additional road capacity, and policies to make transportation efficient and green while contributing to a liveable City.

The TMP categorized the proposed actions under five "Smart Moves":

1. Rethinking Growth to Support the Transportation Master Plan
2. Taking Transit to the Next Level
3. Actively Managing Transportation Demand
4. Greater Investment in Cycling and Walking Infrastructure
5. More Strategic Program of Road Network Improvements

The relevant projects identified in the TMP were translated into the 2014 Development Charges Bylaw and budgets.

DISCUSSION

A summary of TMP initiatives completed and underway is provided as follows.

Rethinking Growth to Support the Transportation Master Plan

The London Plan

Smart Moves suggests a strong link between land use and transportation. The London Plan operationalizes the land use framework required to support the five smart moves. The Plan was created after an extensive two-year conversation with Londoners about their hopes, dreams and aspirations for London's future – to the year 2035. The new plan was adopted by City Council on June 23rd 2016. On December 28th 2016, the Province approved the London Plan with modifications.

Our Move Forward, London's Downtown Plan

On April 14th 2015, Council adopted Our Move Forward: London's Downtown Plan. Our Move Forward is organized into five sections: Planning Framework, Strategic Directions, Transformational Projects, Tools, & Implementation and Targets.

Dundas Place is the first Transformational Project identified in the London Plan. Other projects in the area of the Forks of the Thames are also under consideration as part of the One River Environmental Assessment (EA). Dundas Place represents the first large capital project in the Downtown in recent memory and has been characterized by enhanced consultation and communications to manage impacts to the surrounding intensive business and cultural environment. The return on investment for the City was enhanced through a successful application for Dundas Place funding under the federal Public Transit Infrastructure Fund. Dundas Place is currently under construction and phases will become operational through late 2018 to the end of 2019.

Taking Transit to the Next Level

Shift Rapid Transit

The Bus Rapid Transit Network was approved by Council on May 16th 2017. City Council subsequently approved the Rapid Transit Master Plan and Business Case at its meeting on July 25th 2017. The Shift Rapid Transit initiative has now progressed to a Draft Environmental Project Report (EPR) that builds on the Rapid Transit Master Plan and adheres to the legislative requirements of the Environmental Assessment Act. The draft EPR will provide a strategy for implementing a rapid transit system that will help meet the City's economic development, mobility, environmental and community building objectives while still being operationally feasible and economically viable.

The implementation of a rapid transit system will not only result in significant improvement in London's public transit system, it is a central component of London's land use and transportation policy. Rapid transit will help shape the city's future pattern of growth, encourage intensification and regeneration, and stimulate economic growth for decades to come.

Rapid transit corridors integrated with a strong conventional transit system, supportive land use planning policies and appropriate service coverage and frequency will facilitate more transit trips, reduce traffic volumes and make transit a faster, more reliable, convenient and comfortable transportation option in London.

Implementation of the BRT network will be phased, beginning with the construction of dedicated lanes in the downtown core starting in 2020 and advancing eastward. Between 2022 and 2028, BRT construction will continue through the north, south and west corridors, with Londoners able to begin riding BRT as each leg of the system is complete.

Actively Managing Transportation Demand

Complete Streets Design Manual

City staff have been implementing complete streets principles since the completion of Smart Moves. This approach is becoming formalized with the creation of the Complete Streets Design Manual currently underway. The document will be completed in 2018. Complete streets is a design approach that supports many different forms of mobility with priority allocated based on road classification, place type and surrounding context. Complete streets also provide a positive physical environment that supports the form of development that is planned for, or exists, adjacent to the street.

Downtown Parking Strategy

The Downtown Parking Strategy was approved by City Council on December 13th 2017. The Strategy is a comprehensive study that ties the Rapid Transit initiative, the TMP and the Downtown Plan objectives together. The key objectives for the Downtown Parking Strategy are to:

- provide sufficient shared public parking resources to serve development and facilitate the conversion of surface parking lots into new mixed use development;

- integrate parking management and sustainable mobility policies and programs to encourage the use of active transportation and public transportation options; and,
- effectively and efficiently deliver shared public parking resources.

The plan includes a recommendation to create 200 to 300 new public parking spaces in the downtown over the next twenty years through investment in joint venture projects by participating with developers.

Regional Rideshare

According to the 2009 Household Travel Survey, carpooling represents 10.5% of afternoon peak trips in London. There is potential for more commuters to carpool. In 2015, the City of London partnered with the Counties of Huron and Perth, the City of Stratford, and the Town of St. Marys to align resources and expand London's carpooling service into the broader London region. It was recognised that many of London's major employers have employees commuting from neighbouring communities and many Londoners are employed in these communities as well, and that this two-way flow of commuters are all using London roads. The partnership promotes a ride-matching web service called Regional Rideshare. The service supports those interested in carpooling in finding ride matches based on location and schedule. It is free for registrants, who can sign up as a driver, passenger, or either. Since launching, the service has expanded to include Oxford County, Middlesex County, and the City of St. Thomas, with over 2,000 people registered on Regional Rideshare, and of those over 800 are active and about 130 carpools have been formed.

Active and Safe Routes to School

Active and Safe Routes to School (ASRTS) is a transportation demand management initiative that is promoted in the London Road Safety Strategy. ASRTS is a community partnership. Interested schools are provided with a comprehensive strategy to meet the needs for safe and active transportation in the area of their school. Every year, staff support several ASRTS groups and these commitments are becoming more frequent as more schools and communities embrace ASRTS.

Downtown Transportation Alliance

A feasibility study is beginning. It will include several scenarios on governance, to develop London's first Transportation Management Association (TMA). A TMA is a non-profit, member-controlled organization that provides transportation services in a particular area, in this case, central London. TMAs are generally public-private partnerships, consisting primarily of area businesses with local government support. They are usually more cost effective than programs managed by individual businesses.

The Downtown Transportation Alliance will enable businesses to provide commuter option services for their employees that encourage more efficient use of transportation and parking resources. There is also a unique opportunity for the TMA to serve downtown residents as well. It will also provide an outlet for the City to communicate and engage downtown employers during rapid transit construction and encourage employees to use the system once operational.

Greater Investment in Cycling and Walking Infrastructure

Cycling Master Plan

The London ON Bikes Cycling Master Plan was created with comprehensive community and stakeholder input throughout 2015 and 2016 and was approved by Council in September 2016. The plan supersedes the 2005 Bicycle Master Plan. London ON Bikes takes the guidance provided by Smart Moves and identifies an ambitious plan for infrastructure, policies and programs required to support a growing and thriving cycling culture.

The Cycling Master Plan builds upon previously implemented infrastructure with a vision of a connected convenient network. The Cycling Master Plan identifies 305 km of cycling facilities for implementation in the 15-year horizon along with supportive measures such as bicycle parking, lockups, destination infrastructure and wayfinding signage.

On-road cycling infrastructure is implemented on an annual basis through multi-discipline capital projects and stand-alone cycling projects. Transportation Capital programs. Identified below is the centreline kilometres of cycling infrastructure installed along City roads from 2013 to 2017.

Year	New On-Road Cycling Facilities (centreline km)
2013	4.5
2014	6.4
2015	9.7
2016	11.8
2017	4.3
Total	36.7

Downtown cycle tracks are a premiere feature of the cycling master plan. Construction of the north-south cycle tracks on Colborne Street from Horton Street to Dufferin Avenue began in 2017 and is expected to be completed in June 2018.

A route selection study for an higher order east-west bikeway between the Downtown and Old East Village is beginning in coordination with the pending Old East Village Dundas Street Corridor Secondary Plan. This assessment will consider origins, destinations, route characteristics, rapid transit routing and community input.

The cycling network alos encompasses off-road routes. Critical gaps in the pathway network are also getting solved. The soon to be completed Kiwanis Park Pedestrian Pathway Connection is a critical link that will connect the Kiwanis Park trail system north and south of the CNR line. The completion of this project will create new bridges over the CNR and Pottersburg Creek in addition to 1.3 km of new multi-use pathway connecting the entire Kiwanis Park trail system to the Thames Valley Parkway.

The completion of London ON Bikes Master Plan positioned London well to access provincial funds from the Ontario Municipal Commuter Cycling (OMCC) program. With the recent approval of the Thames Valley Parkway North Branch Connection Environment Assessment (EA) and OMCC funding, the City is progressing the detail

design of this important connection. The project will see the construction of two multi-use pathway bridges across the Thames River North Branch and 1.3 km of pathway connecting Ross Park in the west to the North Athletic Fields to the east.

Cycling Promotion

The inaugural London Celebrates Cycling event was held in June 2017. This partner event consisted of five days of cycling events to celebrate and encourage bike riding for transportation and recreation. Events included guided rides throughout London, a cycling film and discussion at the Wolf Performance Hall, a bike expo at Boler Mountain, and the Celebrate 150 London Bike Rides along the Thames Valley Parkway. Combined, these events drew approximately 500 participants. The 2018 edition will expand to ten days from June 10 to 17, with more partners involved. Events will appeal to all ages and skill levels. It will follow the Thames Region Ecological Associations' Bicycle Festival, taking place in early June.

The City of London is working with Fanshawe College's GIS and Urban Planning Program to update the Bike & Walk Map and create new ways to access this popular information. Fanshawe students were instrumental in creating easy-to-read maps for the Celebrate 150 London Bike Rides in 2017. The students will create the maps for the 2018 event. It is expected that these projects will lead to more collaborations with the College.

Bike Parking

Providing bike parking continues to be a City priority and is addressed as resources and needs allow. This ranges from installing short-term bike rings and racks on public property and working with private property owners to increase available short-term bike parking. In 2014, in partnership with the Middlesex London Health Unit, Western University and the Urban League of London, fifty new bicycle parking posts were created and installed in Old East Village, Richmond Row and Byron Village. In 2016, the City introduced two bike corrals to London. Each corral is installed in an on-street parking space. Where the space would traditionally hold one motor vehicle, a corral can hold up to 14 bikes. Two more corrals are planned for 2018. The City is also planning a facility for secure long-term bike parking in downtown London, geared to Londoners riding to work. In addition, guidelines for bike parking at rapid transit stations and in neighbourhoods are under development.

Enhancing and Promoting London's Cycling Destinations

Building on existing bike-friendly destinations, several the City has enhanced and designated specific 'Cycling Destinations' in London. The purpose of this project is to encourage more recreational cycling on London's bike paths, routes and streets by highlighting key areas in London to visit on bike. The target audience includes both Londoners and visitors. As a first step, City staff identified five parks for enhancements:

1. Forks of The Thames in central London;
2. Kiwanis Park in the south east;
3. Ed Blake Park in the north east;
4. Medway Park in the northwest; and,
5. Springbank Gardens in the south west.

Enhancements such as adding bike racks, benches, picnic tables, and waste receptacles were made to these parks. The next step is to add signage, designating them as bike-friendly. This will be done in concert with other park signage upgrades and consider the desire of older adults to identify and enhance age-friendly locations.

Bike Share System

The London ON Bikes Cycling Master Plan included Action #4: Exploring a Bike Share System. In March 2018, the City of London was successful in its application to the Ontario Municipal GHG Challenge Fund for funding to cover 50% of the costs to establish the first phase of a bike share system ($822,500). The process includes preparation of a business case that details annual operating costs and revenues for the system. It will assist Municipal Council in determining the feasibility and scope of the bike share system. Council will receive a report to determine which provider will design, build, operate, and maintain the bike share system.

It is expected that the first phase of the bike share system would serve neighbourhoods in or near downtown, St. Joseph's Hospital and Western University. It would consist of approximately 300 bikes, serving approximately 40,000 residents, 35,000 employees, two hospitals, Western University and Fanshawe College (downtown campus) faculty, staff and students, and visitors to London.

Walking

Walking is an active mode of transportation promoted by Smart Moves and is an integral part of a transit trip. Implementing new sidewalks is part of a complete streets approach aiming to reduce car-dependency and make neighbourhood streets welcoming, equitable, safe and accessible for community members of all ages, abilities and means. The provision of sidewalks greatly reduces the risk to vulnerable road users by reducing the intermingling with motor vehicles. The Warranted Sidewalk Program is designed to respond when requests and concerns are identified by the public. New sidewalks are also installed through infrastructure renewal capital projects.

In 2016, the funding for the Warranted Sidewalk program was increased from $230,000 to $550,000 to help shorten the wait time for response to sidewalk requests. A larger $1,100,000 program was implemented in 2017 by mobilizing federal funds from the Public Transit Infrastructure Fund (PTIF). 11.1 kilometres of sidewalk have been installed in the last five years as shown in the table below.

Year	New Sidewalk Length (m)
2013	1,137
2014	1,181
2015	1,402
2016	2,243
2017	5,109
Total:	11,072

More Strategic Program of Road Network Improvements

Transportation Growth Program

The Transportation Growth program implements major road expansion projects. These projects provide comprehensive improvements that provide urbanization, capacity and active transportation benefits to support growth and create better environments for a growing city. Smart Moves road improvement projects since 2013 that have been completed or are underway include the following:

Road	Limits	Category	Year	Approximate Investment ($ M) *
Oxford Street	Hyde Park Road to Sanatorium Road	Expansion to four through lanes	2013	12.12
Southdale Road	Wonderland Road to Wharncliffe Road	Expansion to four through lanes	2013	8.89
Sarnia Road	Wonderland Road to Aldersbrook Road	Expansion to four through lanes and Rail Bridge Replacement	2013	2.77
Hyde Park Road	Oxford Street to CPR	Expansion to four through lanes	2014	29.86
Sunningdale Road	Wonderland Road / Sunningdale Road Intersection	Roundabout	2014	2.89
Commissioners Road	Wonderland Road to Viscount Road	Expansion to four through lanes	2015	16.01
Hyde Park Road	CPR to Fanshawe Park Road	Expansion to four through lanes	2015	16.33
Fanshawe Park Road	Adelaide Street to Highbury Avenue	Expansion to four through lanes	2016	16.15

Sarnia Road	Wonderland Road to Sleightholme Ave	Expansion to four through lanes	2016	11.21
Bradley Avenue Extension	Wharncliffe Road to Wonderland Road	New alignment with four through lanes	2017	8.01
Western Road CPR	CPR Grade Separation	Rail Bridge Expansion	2017	17.26
Sarnia Road	Hyde Park Road to Oakcrossing Gate	Two lane urbanization	2017	5.42
Total				146.92

* Approximate value of financial commitments to date. Many projects are not fully closed out. Values include investments in coordinated cost-effective lifecycle renewal of watermain and sewers.

The planning of future major identified in the TMP is also underway. Some of the project planning initiatives currently in progress for improvements are listed below.

- Discover Wonderland is the EA for long-term multi-modal improvements to Wonderland Road from Southdale Road to Sarnia Road.
- The Bostwick Road Improvements EA will facilitate growth and develop the implementation plan for a long curve realignment as envisioned in the Southwest Area Plan.
- The Adelaide Street / CPR Grade Separation EA aims to provide a safer more reliable railway crossing that fits within the surrounding neighbourhood.
- The intersection improvements being scoped in the Fanshawe Park Road and Richmond Street EA are at the centre of a rapid transit village.
- The Wharncliffe Road South EA provides near term improvements to the CN Rail crossing to reduce congestion, improve safety and mitigate cut-through traffic in surrounding neighbourhoods.
- Multi-modal improvements are being scoped in an EA for Western Road, Sarnia Road and Philip Aziz Drive that facilitate mobility in the area of Western University including the interaction between active transportation, rapid transit and local transit.

Highway 401 Interchanges

Connectivity to the provincial freeway network to support growth and improved safety and operations is being implemented through a series of interchange improvements in partnership with the Ministry of Transportation.

A new interchange was constructed at Highway 401 and Wonderland Road to support growth in the Southwest Area. A south extension of Veterans Memorial Parkway to Wilton Grove Road and associated Highway 401 Interchange Improvements were more recently implemented to support industrial growth in the area.

Projects in the planning and design phases include an expansion of the Highway 401 / Highbury Avenue Interchange to support area growth and improvements to the Highway 401 / Highway 4 / Colonel Talbot Road Interchange that will improve safety and operations.

Accessibility and Traffic Signals

London has been proactive with implementation of accessibility improvements. City standards were enhanced to comply with the Accessibility for Ontarians with Disabilities

Act (AODA) in advance of the legislation. All reconstructed intersections are implemented with accessible ramps and tactile plates. Targeted retrofit improvements are also pursued when staff becomes aware of an issue.

Traffic signals improve operations and safety when installed based on the provincial warrant system. In the past five years, eleven new traffic signals were installed.

The City has taken a proactive approach to the retrofitting of audible pedestrian signals to accommodate the visually impaired with stand-alone installations at existing signals. At the end of 2017, 41% of signalized intersections included audible pedestrian buttons.

Countdown pedestrian signals have also been implemented at all signalized intersections for improved user information. Additionally, the assumed walking speed used to calculate pedestrian clearance times was lowered in order to provide pedestrians a more comfortable environment and to contribute to Age Friendly London initiatives.

Progress on traffic signal bicycle detection installations has increased in response to the cycling master plan recommendations and supportive provincial funding. At the end of 2017, 32% of traffic signals were able to detect cyclists.

Year	New Traffic Signal Installations	Audible Pedestrian Signal Installations	Bicycle Detection Installations
2013	4	20	6
2014	2	23	4
2015	1	24	15
2016	0	23	16
2017	4	17	10
Total:	11	87	51

Intelligent Transportation Systems

Looking forward, several intelligent transportation system initiatives are under consideration:

- Improved Transit Signal Priority measures will be installed primarily in conjunction with the rapid transit system;
- Construction of a Transportation Management Centre with CCTV and travel time sensors will help staff proactively adjust traffic signal timings based on real-time data;
- Adaptive Traffic Signal Controls will be piloted to better manage traffic flow on priority corridors;
- Renew London will be integrated into the Waze travel management app;
- An Incident Management System including public notification will be implemented; and,

- A system to detect the frequency and duration of railway blockages is being piloted with potential for provision of real-time user data.

Lifecycle Infrastructure Renewal

Asset condition and corresponding investment needs for transportation infrastructure renewal are evaluated by comprehensive asset management systems. A thorough asset management analysis and the transportation infrastructure gap was identified in a 2013 analysis reported to Civic Works Committee on October 7, 2013 and the 2013 Corporate Asset Management State of the Infrastructure Report.

The quantity of pavement rehabilitation in the last five years to keep roads in a state of good repair for safe and efficient use are shown below in lane-kilometres.

Year	Pavement Rehabilitation (ln-km)
2013	133
2014	127
2015	112
2016	127
2017	96
Total:	595

Asset condition assessment to evaluate return on investment from these programs is performed annually. Below is a plot of the percentage of the road network with a pavement condition rated good to very good since 2013.

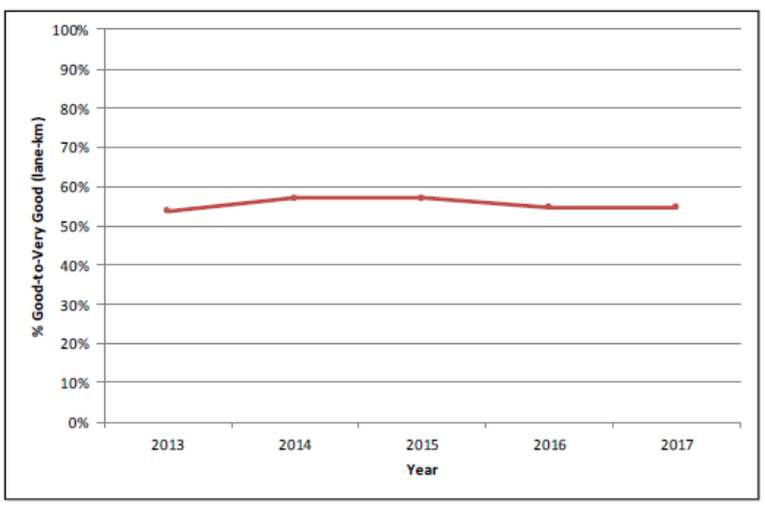

Figure 6.1: Network MBNC Good-Very Good Condition Results (2013-2017)

Condition inspections of bridges are undertaken biennially as required by legislation. Maintaining bridges in safe and functional condition remains a priority. The major bridge upgrade projects performed since 2013 are listed below.

Structure	Year	Work Type
Meadowlily Bridge	2013	Rehabilitation
West Broughs Bridge	2013	Rehabilitation
Second Street Bridge	2014	Rehabilitation
Gore Rd Bridge	2014	Replacement
Hyde Park Road / CNR Overpass	2014	Rehabilitation & Expansion
Highbury Avenue / CN Rail Overpass	2015	Rehabilitation
Hamlyn Street Bridge & Culvert	2015	Rehabilitation
Fanshawe Park Rd Bridge over Stoney Creek	2016	Rehabilitation & Expansion
Windermere Road Bridge over Stoney Creek	2016	Rehabilitation
Blackfriars Bridge	2017	Rehabilitation

In addition to the above major projects, miscellaneous repairs were performed on between 5 and 14 structures each year.

A bridge infrastructure gap remains a concern. Pending near-term (0 to 5 year) needs to maintain a state of good repair are numerous and are estimated at a value of $55 M and include:

- Replacement of the Victoria Bridge (Ridout Street over Thames River South Branch);
- Rehabilitation of the Wenige Expressway Bridges (Highbury Avenue over (Thames River South Branch);
- Rehabilitation of the Riverside Drive Bridge over CN Rail;
- Rehabilitation of Queens Avenue Bridge over the Thames River;
- Rehabilitation of the Wharncliffe Road Bridge over the Thames River;
- Rehabilitation of the Kensington Bridge (Riverside Drive over the Thames River);
- Replacement of the Dundas Street Bridge over Pottersburg Creek;
- Rehabilitation of the Byron Bridge (Boler Road over Thames River);
- Rehabilitation of the Adelaide Street North Bridge (over the Thames River North Branch); and,
- Rehabilitation of the Grenfell Drive Bridge.

The annual bridge upgrade funding in the capital budget forecast to accomplish the infrastructure renewal identified above is inadequate to address the needs above, currently averaging $4M and increasing to $4.5 M in the 10-year horizon.

Other Initiatives

Road Safety Strategy

On March 18, 2014 Council approved the Road Safety Strategy and directed staff to begin development and implementation of the City-led road safety countermeasure action items as identified in the 5-year Road Safety Strategy Plan. In 2017, Vision Zero principles were adopted by Council. Consistent with the aspirational goal identified by Vision Zero, the London Road Safety Strategy outlines a path to a safer road environment for all transportation users in London with identified actions and measurable targets.

Since the start of the implementation of the Road Safety Strategy, many of the strategy countermeasures under the engineering category have been completed or are underway such as:

- red-light camera installations;
- a statistical network screening for all intersections in the City to identify high collision locations;
- pedestrian facilities improvements including more than 90 pedestrian crossovers;
- installation of advance street name signs at many key intersections; and,
- cycling facilities continue to grow in the City.

The strategy includes a focus on education and awareness. As part of the Road Safety Strategy and Vision Zero, the City and its partners in road safety have introduced many campaigns including “Embrace the Red”, “Share the Merge”, “Mind the Green”, “Respect the Limit”, Lego Brick PXO Videos, Share the Road, “Buckle Up Phone Down”, and Josh’s Story.

Transportation Energy Optimization Plan

Replacing the high pressure sodium (HPS) street lights with LED street lights along major roads is a cost effective program with a beneficial return on investment. Phase 1 upgraded 9,276 street lights from HPS to LED in 2014 and 2015. Energy savings of 5,500,000 kWh were achieved in 2017 with an associated cost avoidance of $950,000.

Phase 2 upgraded 10,455 street lights in 2017. The 2017 partial year energy savings extrapolate to 4,035,000 kWh annual energy savings with an associated savings of $620,000.

CONCLUSION

Smart Moves is a Transformational Plan that, when combined with The London Plan, is migrating London's transportation system towards sustainability. The key objectives of the TMP are to enhance quality of life by making existing transportation systems better, including providing more choices to travel, improving transit service and supporting more walking and cycling. The plan promotes a diverse array of initiatives and the report provides a summary of accomplishments to date.

Acknowledgements

This report was prepared with the assistance of Shane Maguire of Roadway Lighting and Traffic Control, Transportation Planning & Design staff including Maged Elmadhoon, Ted Koza, Karl Grabowski, Jane Fullick, Andrew Giesen, and Environmental Programs staff including Allison Miller and Jay Stanford.

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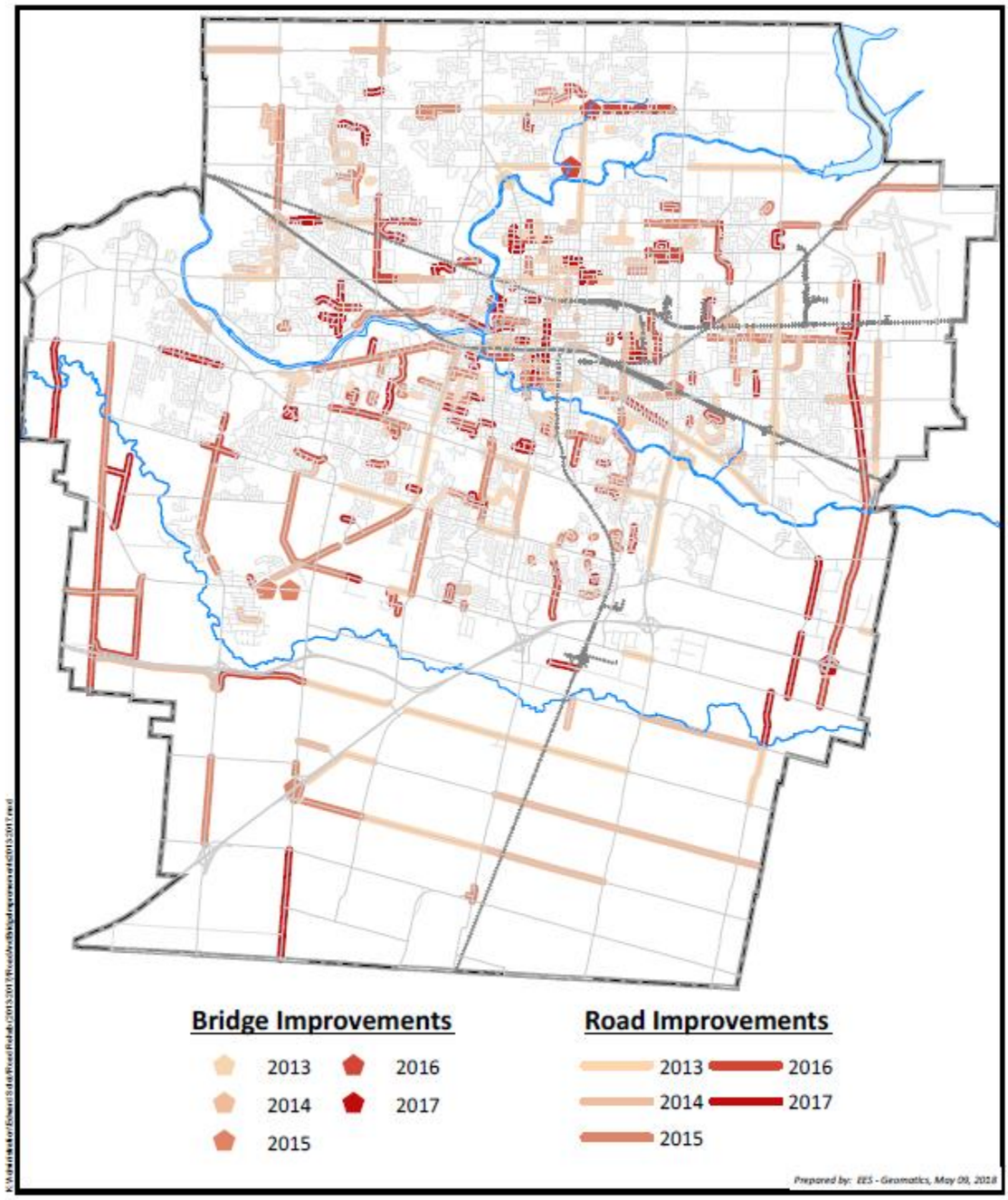
Appendix A: Completed Road Projects, 2013 to 2017

cc. Jay Stanford, Director, Environment, Fleet and Solid Waste
John Fleming, Managing Director, Planning and City Planner

Appendix A
Completed Road Improvement Projects
2013 to 2017



TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING OF MAY 28, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**REVISED GROUPED CONSULTANT SELECTION PROCESS**

RECOMMENDATION

That on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following action **BE TAKEN** with respect to the Grouped Consultant Selection Process:

(a) The proposed Grouped Consultant Selection Process, **BE ENDORSED** as set out in the Grouped Consultant Selection Process document attached, hereto, as Appendix “A”;

(b) The Civic Administration **BE AUTHORIZED** to make minor amendments to the process as part of an annual review in the spirit of continuous improvement; and

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- None

2015-2019 STRATEGIC PLAN

This report supports the Strategic Plan in the following areas:

- Building a Sustainable City: robust infrastructure; strong and healthy environment; responsible growth.
- Leading in Public Service: open, accountable and responsive government.

BACKGROUND

Purpose

The purpose of this report is to update the City’s process for grouped consultant selection and to seek Council endorsement for the new process. The goal of the review and update is to ensure that grouped consultant procurement decisions are made using a competitive process that is both transparent and fair.

Context

Grouped consultant procurements are undertaken when there are multiple projects that are similar in nature that need to be awarded during the same timeframe. The purpose of grouping these assignments is to reduce the amount of administrative work and minimize the number of reports to Committee. A typical grouped consultant procurement would award as many as fifteen projects as part of a two-step Request for Qualification and Request for Proposal process. Following the process, a committee report would be drafted to award the consulting assignments.

The purpose of creating this process document is to provide a guide to City Staff, Council and the consulting community providing the details of how the City of London undertakes grouped consultant selections. In addition, the creation of this document

provides the opportunity to undertake a third-party review to ensure that the process is fair and unbiased. The process document complements the Procurement of Goods and Services Policy. Subject to Council approval, the Grouped Consultant Selection Process document will be referenced as part of a concurrent update to the Procurement of Goods and Services Policy.

DISCUSSION

The guiding principle for the Grouped Consultant Selection Process aligns with those of the overall Procurement of Goods and Services Policy:

> *"To obtain the right services when needed while achieving best value through a transparent, fair and competitive process with a high focus on Customer Service."*

The development of the process included participation from top management, project managers, Purchasing and Supply Services, Legal Division, as well as a review by an independent Fairness Commissioner. The process also builds on the recommendations provided over several years from the City Auditor.

Receiving a high quality of service at a fair cost is a key desired outcome of the grouped consultant selection process. In order to achieve this outcome, "Qualifications-Based Selection" best practices are used to select the preferred consultant. The Qualifications-Based Selection (QBS) requires that consulting services be awarded primarily based on qualifications and competency. Once qualifications and competency has been established, a competitive two-envelope based final selection process is used to award the consulting contract. In the two-envelope method, submissions are received in two separate envelopes with the first envelope containing the technical proposal and the second envelope containing the information on the cost of the proposal.

The grouped consultant selection process is to be applied to consultant appointments that are similar in nature. The following list provides several examples of consultant appointments where grouped selections could apply:

- Growth related stormwater servicing,
- Infrastructure lifecycle renewal program,
- Major transportation infrastructure projects.

Grouped Consultant Selection Benefits

The overall purpose of the Grouped Consultant Process is to reduce the requirements related to an otherwise large number of single consultant appointments. The grouped selection reduces both administrative requirements and the overall number of reports required to be considered by Committee and Council. Some of the programs that use the process issue as many as 10-15 consulting assignments per year.

Changes from the Current Process

The City of London has carried out variations of grouped consultant selection for over ten years. The new process includes several changes from our previous practices. Prior to 2017, grouped consultant selections were made from a predefined consultant list. The new process mandates that a Request for Qualifications stage will be undertaken for all grouped consultant procurements. The Request for Qualification will also be publicly advertised as an open invitation. The objective of this change is to ensure that the grouped consultant process is open to all consulting firms and that our process is in compliance with the Canada\European Union Comprehensive Economic and Trade Agreement (CETA).

The process for selecting a successful consultant has also been modernised. The previous process required a consultant to submit a technical proposal that did not include a detailed fee summary. During the previous process, the consultant with the technical proposal with the highest score would be selected to submit a fee summary and, subject to a review of the estimate, would be selected for the contract. The new process requires the consultant to make a “two-envelope” submission. One envelope includes the consultant’s technical proposal and the second envelope includes a detailed fee summary. The review team scores the technical proposal while the fee summary remains sealed. Once the technical proposals are evaluated, the review team convenes, the fee summary is opened, and the successful consultant is selected based on a predetermined calculation that considers both the technical score and the total fee value. The objective of this change is to ensure that the outcome of the new process is the selection of a highly-qualified consultant at a fair cost to the City.

Independent Fairness Commissioner Review

Bill Mocsan, of the firm HKA which specializes in public procurement and fairness services for public and broader public sector organizations reviewed the document alongside the City’s Procurement of Goods and Services Policy to ensure it is a fair procurement document. This means ensuring the process is open, transparent, and has integrity while ensuring fair, consistent, and unbiased treatment of bidders. The commissioner had some minor comments to the document but offered the following overall observation:

> *I have no concerns with the Document from a fairness perspective. I like the idea of grouping a series of related assignments or tasks into a single procurement because it forms the foundation of a long-term commitment on the part of the supplier. It also helps to establish a better partnership between the supplier and the City and encourages the supplier to accept more of an ownership responsibility for the success for the final product. If this strategy is clearly articulated in the procurement documents, I believe it can lead to a positive working relationship with the successful bidder and result in a better end-product.*

CONCLUSIONS

The Grouped Consultant Selection Process provides an efficient, high value, and cost effective means of awarding a large number of Consultant assignments. The guiding principles of providing a competitive process that is transparent, fair, and competitive have formed the basis for this process. As noted in the Procurement of Goods and Services Policy, grouped consultant procurements may be undertaken for more than one project if the projects are similar in nature, the Consultants possess the skills necessary to undertake this type of work and efficiencies are realized by the City. The Grouped Consultant Selection Process incorporates industry best practice principles such as Qualification Based Selection and links to the City’s Project Management Process. Moving forward, this process will be administratively reviewed through a continuous improvement program in tandem with updates to the corporate Procurement of Good and Services Policy.

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Attach: Appendix “A” – Grouped Consultant Selection Process document

CC: John Freeman, Manager, Purchasing & Supply
Peter McAllister, Chair, London Chapter, Consulting Engineers of Ontario

CITY OF LONDON
GROUPED CONSULTANT SELECTION PROCESS

May 2018

1. INTRODUCTION

The following document is a reference guide for the City of London's Grouped Consultant Selection process. The City of London's Procurement of Goods and Services Policy outlines the processes to be followed in order to obtain the best value when purchasing goods or contracting services. The policy is a valuable resource and provides definitions for the procurement terminology used in this document. The policies guiding principle is that "procurement decisions will be made using a competitive process that is transparent, fair, and competitive". This document should be read in tandem with the Procurement of Goods and Services Policy currently in force and effect. As noted in the policy, grouped consultant procurements may be undertaken for projects that are similar in nature, the consultant possess the skills necessary to undertake this type of work, and efficiencies are realized by the City. The following chapters provide the purpose of the process, application and scope of the process, and details on the four major steps in the process. This document is intended to act as a guide and outline of the overall process of grouped consultant selections. Each procurement process for grouped projects will have an associated REOI/RFQUAL and RFP document that will outline the detailed requirements for that particular group of projects. The detailed requirements presented in REOI/RFQUAL and RFP document operationalize and supersede any of the broad principles presented in this document.

2. PURPOSE AND DEVELOPMENT

The guiding principle for the grouped consultant selection process aligns with those of the overall Procurement of Goods and Services Policy:

> *"To obtain the right services when needed while achieving best value through a transparent, fair and competitive process with a high focus on Customer Service."*

The development of the process included participation from top management, project managers, Purchasing and Supply Services, Legal Division, as well as a review by an independent Fairness Commissioner. The process also builds on the recommendations provided over several years from the City Auditor. The process has also been submitted to Committee and Council for endorsement.

The overall purpose of the grouped consultant process is to reduce the requirements related to an otherwise large number of single consultant appointments. The grouped selection reduces both administrative requirements and the overall number of reports required to be considered by Committee and Council. It accomplished this without increasing the City's exposure to procurement-related risks.

Receiving a high quality of service at a fair cost is a key desired outcome of the grouped consultant selection process. In order to achieve this outcome, "Qualifications-Based Selection" best practices are used to select the preferred consultant. The Qualifications-Based Selection (QBS) requires that consulting services be awarded primarily based on qualifications and competency. Once qualifications and competency has been established, a competitive two-envelope based final selection process is used to award the consulting contract. The chapter titled "Selection and Evaluation Process" provides details on the integration of qualifications-based selection principles with the grouped consultant selection process.

3. GROUPED CONSULTANT SELECTION APPLICATION AND SCOPE

The grouped consultant selection process is to be applied to consultant appointments that are similar in nature. The decision to group consulting assignments should be considered early as part of the "Project Initiation" stage of the overall Project Management Process. The following list provides several examples of consultant appointments where grouped selection could apply:

- Growth related stormwater servicing,
- Infrastructure lifecycle renewal program,
- Major transportation infrastructure projects.

The procurement should be structured to align with the following two principles:

- When applicable, all work that is anticipated to be awarded related to a project should be included within a single procurement process. For example, a project that is being considered is to include three phases: preliminary design, detailed design, and construction administration should be incorporated into a single procurement process. In the case where there is limited information available to establish the value for the later phases of work and it is the intention to award the subsequent phases to the same consultant, the procurement documents will clearly outline that future phases of the work will be awarded to the successful consultant in accordance with the City of London's Procurement of Goods and Services Policy.
- Contracts are to be structured so that if a Consultant performs poorly the contract can be terminated. The contract will be structured in way to allow termination at any time and at no cost to the City.

4. SELECTION AND EVALUATION PROCESS

The grouped consultant selection process includes four steps and is to be reviewed annually in the spirit of continuous improvement. Any revisions are to be completed within the context of updates to the overall Procurement of Goods and Services Policy. Grouped consultant appointments are to be awarded through a two-stage procurement process. The first-stage will be an open, publicly advertised call for combined expression of interest and request for qualification (REOI/RFQUAL). The qualification period will be defined in the REOI/RFQUAL document and will be typically for a two year period. Drafting of the REOI/RFQUAL and RFP documents should be undertaken as part of the "Project Planning" stage of the Project Management Process.

Stage-two of the procurement process includes issuing an invitational Request for Proposal to the firms qualified during the first stage of the process. RFPs may be issued several times during the REOI/RFQUAL qualification period. The following sections provide further details on the various steps of the selection and evaluation processes and should be read in concert with the current Procurement of Goods and Services Policy.

4.1. STEP 1: EXPRESSION OF INTEREST/PRE-QUALIFICATION (REOI/RFQUAL)

All grouped consultant selections should begin with an open, publicly advertised expression of interest/pre-qualification as detailed in the Procurement of Goods and Services Policy. The REOI/RFQUAL process shall be administered by Purchasing and Supply Services with support from the Project Manager. Further details on the REOI/RFQUAL process can be found in the current Procurement of Goods and Services Policy.

Evaluation of the various submissions may vary based on the types of projects or service area and will be specified in the REOI/RFQUAL document. The following table is a typical evaluation table that may be used for some groups of projects. This table may vary depending on the nature and specific requirements of the project.

Table 1 Typical REOI/RFQAUL evaluation table.

Evaluation Criteria	Weighting	Scoring Guide
Understanding of Project Success Factors and General Approach	30%	Ranking of the Consultant's understanding of the project relative to the requirements outlined in the procurement document.
Experience & Knowledge of projects of a similar nature	35%	A ranking of the Consultant's experience on successful projects undertaken for municipal clients of a similar nature.
Qualifications & Skills of Staff Included in Project Team	20%	A ranking of the projects team's overall experience. This score will include rating the experience of both junior and senior staff on the project while considering the relative time each will be dedicating to the project.
Consultant Performance Rating Score	15%	The Consultant Performance Rating Score is calculated on an annual basis based on the consulting company's performance on previous City of London assignments. Consultants without scores from the previous year will be given their most recent score within 5 years. If the consultant has not been rated in the last 5 years they will receive a score equal to the mean average of all consultant scores from the previous year.

All submissions will be reviewed by a selection committee composed of a minimum of three (3) City staff and ranked in accordance with the evaluation criteria included in the REOI/RFQUAL document. If the Consultant's submission receives a score of less than 70% based on the evaluation criteria, the consultant will not be short-listed.

For certain categories of projects, the Project Manager may sort the projects and qualified consultants into categories based on project complexity. In these cases, the explanation of the categories and the associated evaluation criteria will be outlined in the REOI/RFQUAL document.

4.2. STEP 2: REQUEST FOR PROPOSAL (RFP)

The second-stage of the selection process shall include a Request for Proposal (RFP) issued to short-listed firms that have successfully satisfied the REOI/RFQUAL. The short-listed firms shall include at a minimum of three (3) qualified firms for each project. The RFP will require these firms to state their approach to the proposed project and their experience and knowledge of projects similar in nature. The RFP process shall be administered by the Purchasing and Supply Division with support from the Project Manager and project partners. Further requirements for RFPs are provided in the current Procurement of Goods and Services Policy. The intention of this selection process is to provide a transparent and fair process that aims to pair consultants with projects that match qualifications. The consultants will be short listed based on the information provided in the REOI/RFQUAL document.

All submissions will be reviewed by a selection committee composed of a minimum of three (3) City staff and ranked in accordance with the evaluation criteria included in the RFP document. Similar to the RFQUAL stage discussed in the previous section, evaluation of the various submissions may vary based on the types of projects or service area.

Proponents will be selected using a best value based selection process utilizing a "two (2) envelope method"; procurement process in which submissions are received in two (2) separate envelopes.

- The first envelope consists of the technical proposal and work plan; and
- The second envelope consists of the cost proposal information.

4.2.1. TECHNICAL PROPOSAL EVALUATION

The technical evaluation will be completed by a by a selection committee composed of a minimum of three (3) City staff and ranked in accordance with the evaluation criteria included in the RFP document. The consultant will be requested at a minimum to provide a work plan and a matrix indicating the resources assigned to the project in the form of hours per staff member per project task. Depending on the nature of the project, consultants may be required to prepare a presentation for the City of London prior to the evaluation of the technical submission. Similar to the RFQUAL stage discussed in the previous section, evaluation of the various submissions may vary based on the types of projects or service area. The following is a typical evaluation table:

Table 2 Typical RFP evaluation table.

Evaluation Criteria	Weighting	Scoring Guide
Methodology, Approach and Understanding of Project Goals and Objectives	40%	A ranking of the Consultant's understanding of the project relative to the requirements outlined in the procurement document.
Project Team Members Qualifications	20%	A ranking of the projects team's overall experience.
Experience on Directly Related Projects	20%	A ranking of the Consultant's experience on successful projects undertaken for municipal clients of a similar nature.
Recommendations/Innovative Ideas	20%	A ranking of the Consultant's recommendations and innovative ideas provided for the proposed project.

The onus is on the consultant to show their knowledge, understanding and capacity to conduct the work outlined in the RFP as part of the first envelope submission. The detail and clarity of the written proposal submission will be considered indicative of the consultant's expertise and competence.

Through the RFP submissions, the Consultant must provide a work plan that will include a matrix showing the number of hours per staff member per task. Consultants should make any recommendations about measures/approaches that would make the most effective use of resources available for the work.

Submissions receiving a score of 70% or above will move on to the next step of the process which includes opening the second envelope. Submitted proposals that receive a score of less than 70% based on the evaluation criteria included in the RFP document will be disqualified.

4.2.2. COST PROPOSAL EVALUATION

Each RFP submission will have its associated fees evaluated relative to the other RFP submissions for the same project. Similar to technical evaluation, evaluation of the fees may vary based on the types of projects or service area. As noted previously, the cost proposal information will be contained in the second envelope.

The second envelope may be opened and evaluated only after the information in the first envelope has been evaluated in accordance with the requirements of the Request for Proposals document. The

consultant that provides the best value for cost will be selected as the successful consultant. The best value for cost will be calculated using the technical score determined during the evaluation of the first envelope submission and the bid price provided in the second envelope submission. This could be done by including costs as one of the evaluation criteria, with the different proposals being given a different score based on their relative cost. It is also possible to do this by calculating an "Evaluated Bid" by giving a weighting to the cost proposal based on the technical score. For each project, the particulars and method for considering cost will be described in the RFP.

When the bid price submitted by the successful consultant is equal to or less than the City's internal estimate or budget allocation a recommendation will be brought to Committee and Council to award the contract to the successful consultant. The award of contracts where the bid price exceeds the City's internal estimate or budget allocation are subject to the provision of the City of London's Procurement of Goods and Services Policy.

4.3. STEP 3: PROJECT EXECUTION

As outlined in the City's Project Management Process, managing scope, budget, schedule, and project team members are several key elements of the Project Execution phase. As many of these aspects are highly affected by Consultant performance, it is key that the Project Manager communicates performance expectations to the Consultant early and often. Providing this input on an ongoing basis will ensure that the Consultant is aware of their performance and allowed to course correct, if required, in a timely fashion.

4.4. STEP 4: CONSULTANT EVALUATION

The final step of the grouped consultant selection process is providing the Consultant with a final evaluation. The Consultant Performance Review is a method of measuring the performance of a consultant's work on a particular project and projects done over the course of the previous year. These reviews are aggregated annually and are used to calculate the Consultant's "Consultant Performance Rating Score". The Consultant Performance Rating Score is then used in the REOI/RFQUAL evaluation table to determine whether the Consultant is eligible for pre-qualification. This score is included to provide an incentive for high performance. Scores are aggregated without regard for service area. Consultants without a recent score will be given the most recent score they have received within the past 5 years. Consultants that do not currently have a rating or have not been rated in the last 5 years will receive a score equal to the arithmetic mean average of all consultant scores from the previous year.

Project Managers take the lead in the consultant evaluation process. Project Managers are to focus on criteria such as scheduling, budget control, and effectiveness in public consultation, the use of innovation, effective clear communication and accuracy of deliverables. The Consultant Performance Review template has been included as "Appendix 'A': Consultant Performance Review Form".

5. CONCLUSION

The Grouped Consultant Selection process provides an efficient, high value, low risk, and cost effective means of awarding a large number of Consultant assignments. The guiding principles of providing a competitive process that is transparent, fair, and competitive have formed the basis for this process. As noted in the Procurement of Goods and Services Policy, grouped consultant procurements may be undertaken for more than one project if the projects are similar in nature, the Consultants possess the skills necessary to undertake this type of work and efficiencies are realized by the City. The Grouped Consultant Selection process incorporates industry best practice principles such as Qualification Based Selection and links to the City's Project Management Process. Moving forward, this process will be administratively reviewed through a continuous improvement program in tandem with updates to the corporate Procurement of Good and Services Policy.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P. ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**CONNECTED AND AUTONOMOUS VEHICLES TECHNOLOGY STRATEGY**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental and Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to developing a policy and pilot project to address the introduction of connected and autonomous vehicle technology:

(a) the Civic Administration **BE DIRECTED** to develop a Connected and Autonomous Vehicle Strategic Plan;

(b) a Connected and Autonomous Vehicle Working Group **BE ESTABLISHED to** prepare for the introduction of connected and autonomous vehicles;

(c) the Civic Administration **BE APPROVED** to become a formal member of the Municipal Alliance for Connected and Autonomous Vehicles in Ontario (MACAVO);

(d) the Civic Administration **BE AUTHORIZED** to review potential pilot projects which address the introduction of connected and autonomous vehicle technologies; and

(e) the Civic Administration **BE DIRECTED** to coordinate with London Transit Commission (LTC) on the potential development and implementation of “first mile / last mile” (FMLM) transit pilots and programs.

2015-2019 STRATEGIC PLAN

The following report supports the 2015-2019 Strategic Plan through the strategic focus areas of:

- **Building a Sustainable City**
    - Creating robust infrastructure through management and upgrades.
    - Convenient and connected mobility choices through improved congestion management and roadway safety.
    - Responsible growth through new infrastructure investment.

- **Growing Our Economy**
    - Local, regional, and global innovation through new and emerging technology to improve quality of life.
    - Strategic, collaborative partnerships with key stakeholders and municipal neighbours.

BACKGROUND

In Canada, close to 1,900 fatalities occur on roadways each year. The automotive industry has been working to improve overall roadway safety through the introduction of various levels of artificial intelligence in connected and autonomous vehicle (CAV) technology. In the future, CAV technology will be integrated into all modes of transportation and it is no longer a question of if the technology will disrupt the way we travel within our cities, but a question of when. CAVs with a lower level of automation are currently available in the market place. It is anticipated that CAVs with a high level of automation or full automation will be widely available by 2040.

CAV technology has the potential to reshape our transportation system, improving road safety for all users, traffic congestion, mobility equity, land use and environmental health.

Automated vehicles are now being piloted on Ontario's streets in the Greater Toronto Area, in various forms and for a variety of purposes. Partially automated vehicles are providing assistance to drivers in the form of cruise control, automated braking, parallel parking and other safety features included in newer vehicles. Highly automated vehicles - often referred to as driverless or autonomous cars – are being tested on public roads in Ontario, including Toronto, through a permit from the Ministry of Transportation.

While discussions on the potential benefits of driverless vehicles have increased, it is not well understood what the adoption of the technology will mean for the cities that they will drive in. Instead of taking a reactive approach to the disruption created by the technology and in order to maximize the benefit of the technology, now is the time to evaluate, assess, and plan for the onset of vehicle automation.

The age of the autonomous vehicle will usher in sweeping changes to transportation, energy consumption, passenger safety and business efficiency. CAV technology will transform cities, and a Smart Cities approach will be needed to deploy the digital and physical infrastructure necessary to connect cars to vital information.

The emergence of CAVs as a significant mode of travel and movement for goods and services will have disruptive impacts on transportation systems as a whole and industry in general in a similar fashion to the emergence of conventional automobiles over a century ago.

The following report outlines how the City can begin to prepare for the introduction of CAVs on its streets.

DISCUSSION

Overview: Connected and Autonomous Vehicles

Autonomous vehicles (AVs) are driverless or self-driving vehicles that are capable of detecting the surrounding environment using artificial intelligence (AI), a variety of sensors, and a global positioning system (GPS) coordinates among other means to successfully and safely navigate a transportation system.

There are six levels of driving automation developed by the Society Automotive Engineers (SAE) which span from no automation (Level 0) to full automation (Level 5).

LEVEL 0	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
No automation	Driver assistance	Occasional self-driving	Limited self-driving	Full self-driving under certain conditions	Full self-driving under all conditions

AVs have the potential to deliver the following if properly managed:

- Environmental benefits;
- Economic prosperity;
- Societal betterment;
- Safety improvements;
- Reduce traffic congestion; and
- Improved flow of goods and services.

Interrelated with autonomous vehicles is connected vehicle (CV) technology, which is integral to providing up-to-date information to AVs through a variety of channels, including:

- Vehicle-to-Vehicle (V2V) communications;
- Vehicle-to-Infrastructure (V2I) communications; and
- Vehicle-to-Everything (V2X) communications.

Some elements of CV technologies are already being implemented in other cities and are being considered for the City's current Transportation Intelligent Mobility Management System (TIMMS) project.

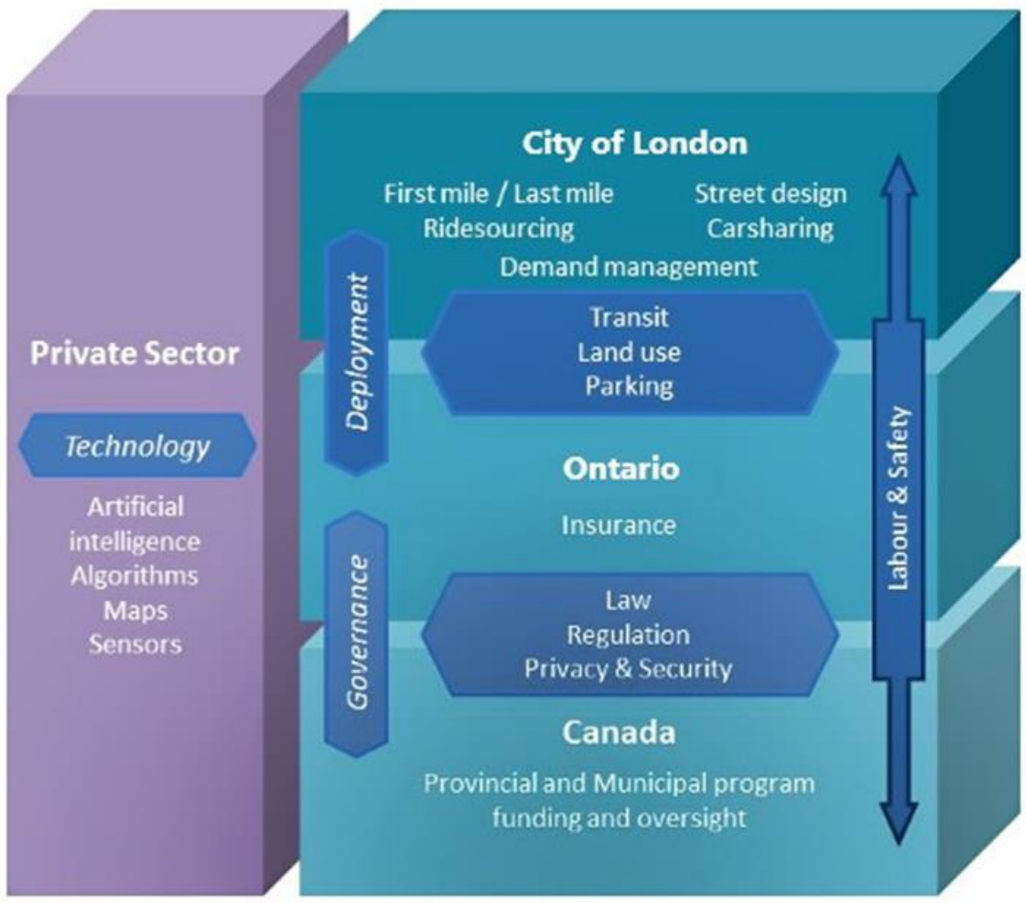
Legislative Structure and Programs

Automated vehicles, including personal vehicles, taxis, small buses, and delivery robots are currently being tested in a number of locations within the United States, Australia, New Zealand, Europe, and Asia by both industry and government agencies. Nearly all automobile manufacturers have vehicles available commercially that include automation capabilities at SAE Levels 1 and 2. Most manufacturers have also developed prototypes or have partnered with suppliers and technology companies to test SAE Levels 3, 4, and 5 automated vehicles.

Different stakeholders have different roles in the development and implementation of new technology like connected and autonomous vehicles (Figure 1). Private industry develops the technology while all three levels of government (Federal, Provincial and Municipal) play a role in how the technology is regulated and deployed.

In Canada, vehicle standards are regulated by the federal government through the Motor Vehicle Safety Act, which includes the Canada Motor Vehicle Safety Standards. In "Transportation 2030: A Strategic Plan for the Future of Transportation in Canada" the federal government has indicated support for the use of connected and automated vehicles.

Figure 1 – CAV Partnerships



In Ontario, the use of public roads by all vehicles is governed by the Province of Ontario through the Highway Traffic Act. On January 1st, 2016, Ontario became the first province in Canada to pilot an on-road test program for automated vehicles and related technology. The pilot program follows strict governance to ensure public safety as CAV technology develops and matures.

In December 2017, the Ministry of Transportation (MTO) identified through the Ontario Regulatory Registry proposed amendments to the AV pilot regulation. These proposed enhancements to the AV pilot program are to:

- **Permit driverless testing of AVs.** The testing of AVs as part of the pilot through additional application requirements, such as a law enforcement and work zone interaction plan and alerting local municipalities of AV testing.

- **Expanded data reporting requirements.** Pilot participants would need to indicate the SAE level of the AV tested, annual reports on unplanned or non-scheduled disengagements, in-vehicle telematics (e.g. hours tested, distanced travelled, speed, harsh braking, etc.), weather conditions, and road types.

- **Permit public registration of SAE Level 3 AVs.** This would include Original Equipment Manufacturer (OEM) AV technology eligible for sale in Canada, not aftermarket and/or AV conversion products. The MTO expects SAE Level 3 AVs to be commercially available in the near future. MTO communications will include updated beginner driver education handbooks and outreach to auto industry stakeholders to leverage the availability of safety information to consumers.

- **Permit cooperative truck platoon testing.** A new pilot (within the existing AV pilot) that allows the testing of cooperative truck platooning with a driver present in each vehicle, under strict conditions and along specified routes. Cooperative truck platoons utilize a form of adaptive cruise control with V2V communication that allows for closer following distances and improved efficiencies.

The effective date of the above-proposed amendments has not been identified.

Autonomous and Connected Vehicle Technology Collaboration

Numerous organizations in Ontario and across Canada have taken up the task (with public and/or private support) to further develop CAV technology through various programs and projects. These organizations include the Ontario Centre of Excellence, the Autonomous Vehicle Innovation Network, the Institute of Transportation Engineers (ITE), Transportation Association of Canada (TAC), the Canadian Urban Transit Association, the Canadian Urban Transit Research and Innovation Consortium, and the National Operations Center of Excellence.

Leading the way in Canada, several cities have more actively pursued CAV development programs and projects, including Calgary, Edmonton, and Toronto. Civic administration has been networking directly with Canadian and international municipalities, through direct outreach and through involvement in various task forces and committees at ITE and TAC.

The City of London has been participating informally through the Ontario Good Roads Association's Municipal Alliance for Connected and Autonomous Vehicles in Ontario (MACAVO). The purpose of the Alliance is to provide a forum for municipal staff to collaborate on researching, facilitate vehicle testing with industry and academics, and to share resources and knowledge for integrating connected, automated and autonomous

vehicles into municipal operations. Other cities such as Toronto, Barrie, Brampton, Hamilton, and Stratford, as well as the Regions of Durham and York, are participating in MACAVO.

Transit and CAV Technology

Transit is a major component of mobility. Electric vehicles, autonomous technology, and driverless shuttles could all combine to create a new vision of what transit service looks like. The adaptation of CAV technology may lead to changes in the designation of space in public rights of way. Large-scale rapid transit systems in dedicated lanes have the flexibility to control what types of vehicles can use the dedicated lanes, when they can be used, and to leverage the infrastructure to optimize operations as technology evolves.

Coordination of the interaction between mass transit and CAV mobility providers to ensure that an integrated mobility model, which moves the largest amount of people, will be the key to ensuring congestion is managed in the future.

The London Transit Commission (LTC) has been engaged with the Canadian Urban Transit Research & Innovation Consortium (CUTRIC), an organization that supports projects that develop the next-generation of mobility and transportation technologies for Canadians. CUTRIC is pursuing a bid through the National Smart Vehicle Demonstration and Integration Trail with the City of Calgary, York Region and Trois-Rivières.

This project plans to integrate semi-autonomous and fully autonomous, connected, and electric vehicle shuttles/pods and buses across up to 12 Canadian municipal jurisdictions as “first-mile / last-mile” applications.

CUTRIC's National Smart Vehicle Project is being developed following the successful launch this year of CUTRIC's $45 million Pan-Canadian Electric Bus Demonstration & Integration Trial in Vancouver, Brampton, and York Region.

The National Smart Vehicle Project has a planning completion deadline of December 2018, and a full funding confirmation deadline of September 2019, with expected on-road launches in up to nine cities in Canada by 2020. The LTC and City had an initial discussion with CUTRIC but the project parameters limited the LTC’s ability to participate. The project will be monitored and assessed for future opportunities.

Connected and Autonomous Vehicle Technology Strategy

With the introduction of CAVs onto our streets, it is recommended that a Connected and Autonomous Vehicle Technology Strategic Plan be developed and that a multidisciplinary working group be created to guide this initiative including representatives from the following departments and commissions:

- Environmental and Engineering Services;
- Development and Compliance Services;
- Planning;
- Information Technology Services; and,
- London Transit Commission.

The CAV Working Group would collaborate with external partners such as Western University, Fanshawe College, London Economic Development Corporation and other community partners.

The goal of the strategic plan will be to help prepare the City of London for this change, review the potential implications for City departments and commissions, and develop a cross-divisional strategic position to ensure preparedness amongst all City services. The strategy should also develop a framework for pilot projects that incorporate collaboration among transportation professionals, telecommunication providers, vehicle companies, and software technology companies, in order to encourage innovation and incentivize development.

The City of London should consider potential policy implications and develop a strategy that balances the many interests and issues at play. A number of the considerations for CAVs that should be reviewed include:

- Infrastructure upgrades and improvements including technological/ICT infrastructure;
- Land use policy (e.g. zoning, density, parking, etc.);
- Transit service policy and enhancements;
- Parking strategies and revenue impacts;
- Safety implications of CAV technology;
- Privacy and security of IT systems, data management and sharing;
- Accessibility policy to make transportation access more equitable; and
- Public awareness and education on CAV technologies.

A more detailed technical background on CAVs is provided in **Appendix A**.

CONCLUSION

Connected and autonomous vehicles have the potential to impact the existing legislative environment and a wide array of City policies, programs, and services, as well as how the City conducts business.

While early implications will primarily be focused on the transportation system, over the long-term and with higher levels of automation, there may be larger implications beyond the transportation network that City departments need to prepare for.

The development of a Connected and Autonomous Vehicle Technology Strategy will ensure this technology is developed in a way that increases mobility, safety, accessibility, innovation, and economic growth in the City of London within the regulatory barriers developed at the Federal, Provincial, and Municipal levels.

Acknowledgements

This report was prepared by Michelle Morris, EIT, Transportation Planning and Design, and Jon Kostyniuk, P.Eng., Roadway Lighting and Traffic Control Division.

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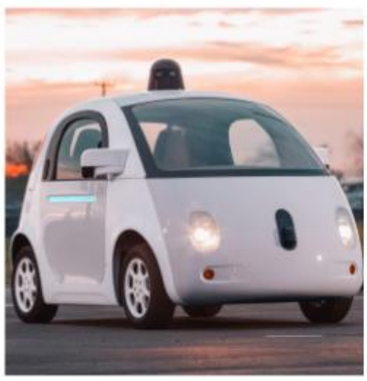
May 14, 2018/jdk

Attach: Appendix A – Connected and Autonomous Vehicles: Technical Background

cc: George Kotsifas, Managing Director, Development and Compliance Services and Chief Building Official
John Fleming, Managing Director, Planning and City Planner
Mat Daley, Director, Information Technology Services
Kelly Paleczny, General Manager, London Transit Commission
Chair and Members, Transportation Advisory Committee


Appendix A

Connected and Autonomous Vehicles:

Technical Background


Prepared for the
Corporation of the City of London

Civic Works Committee Meeting

May 28, 2018

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1 INTRODUCTION

Autonomous vehicles (AVs) are driverless or self-driving vehicles that are capable of detecting the surrounding environment using artificial intelligence (AI), a variety of sensors, and a global positioning system (GPS) coordinates among other means to successfully and safely navigate a transportation system.

AVs have the potential to deliver the following if properly managed:

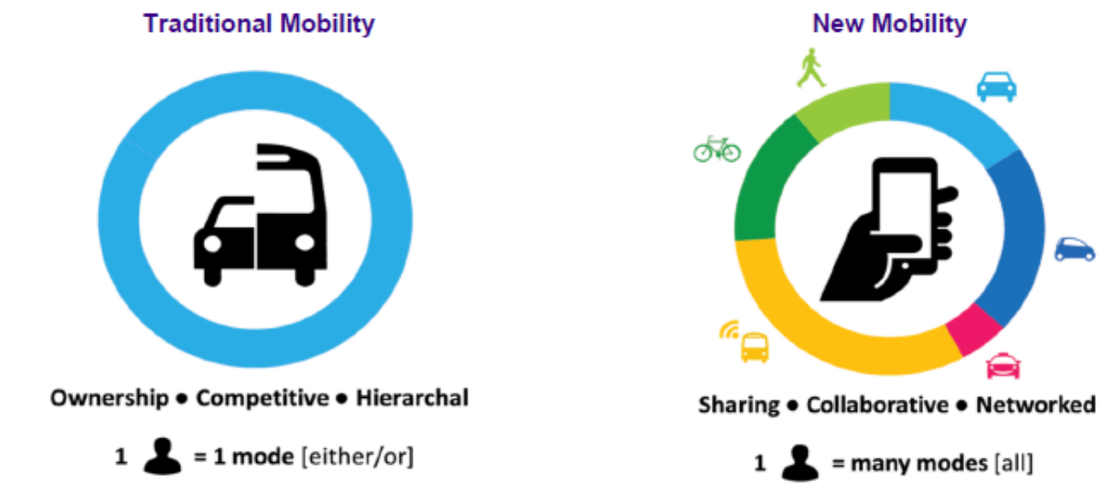
- Environmental benefits;
- Economic prosperity;
- Societal betterment;
- Safety improvements;
- Traffic congestion management; and
- Improved flow of goods and services.

One of the major improvements to road safety is the elimination of human driver error and distraction, due to the AV technology taking over the driving operation. However, this expectation needs to be tempered with early levels of vehicle autonomy where the attention of the human driver to maintain safe vehicle operations remains critical.

It is anticipated that AVs will be widely available and market-ready anywhere between now and 2040[1] with some lower level automation vehicles already on the market and in use today.

The emergence of new app-based transportation services, such as Uber and Lyft, has expanded the market for ride-hailing services by offering lower prices, improved convenience and rider amenities, and stronger brand recognition compared to traditional taxis. These services include new features such as a split-fare and shared-ride / carpool functions, enabling two or more people to share rides and split the cost.

The impending arrival of AV technology is expected to have a significant impact, by changing the personal economics of transportation choice, and likely resulting in a shift in the current transportation paradigm.



There are two primary ownership models anticipated for AVs as they emerge, the individual ownership model and the shared ownership model.

The individual ownership model is similar to the current, widespread car ownership model. If the AV technology advances with emphasis on individual ownership, this will likely decrease public transit use, promote more travel, and result in more cars on the road.

The shared ownership model which is similar to car sharing, ridesharing, or Mobility-as-a-Service (MaaS) programs that may likely see a communal fleet of vehicles to service transportation needs and will reflect the trend that new generations are not as interested in vehicle ownership as previous generations[2].

In practice, it is more likely that a mixed ownership model consisting of both individual and shared ownership will emerge. However, the proportion of individual vs. shared ownership is uncertain as the direction of AV technology is unclear at this time.

Policymakers should work with transportation professionals, telecommunication providers, vehicle companies, and software technology companies to assess the impacts, develop short and long-term implementation policies, and prepare investment strategies to facilitate and mitigate the impacts of this technology.

Interrelated with autonomous vehicles is connected vehicle (CV) technology[3], which is integral to providing up-to-date information to AVs through a variety of communications channels, including:

- **Vehicle-to-Vehicle (V2V):** Enhance the situational predictability and operation of AVs in close proximity such as through platooning (i.e. AVs travelling together in close formation), intent (e.g. lane changes, braking, etc.), and hazards (e.g. flat tire, roadway debris, etc.).

- **Vehicle-to-Infrastructure (V2I):** Directly communicate the status and condition of nearby infrastructure (i.e. infrastructure-to-vehicle) and presence/intent of the vehicle-to-infrastructure. Examples of this include Smart Traffic Signals that better manage transportation demands and congestion; and, Smart Parking that efficiently directs AVs to available parking spaces.

- **Vehicle-to-Everything (V2X):** A more general term for communications with an AV's surroundings in addition to V2V and V2I that may include vehicle-to-pedestrian/bicycle communication (e.g. location information to reduce conflict and improve safety) or vehicle-to-network communication (e.g. Google's Waze or similar real-time application).

Some elements of CV technologies are already being implemented in other cities and are being considered for the City's current Transportation Intelligent Mobility Management System (TIMMS) project.

2 TAXONOMY AND DEFINITIONS

Many automated features, ranging from cruise control to self-parking and lane assist, have been available on vehicles for a number of years. To answer the question of when a vehicle crosses over from being high-tech to self-driving, the Society of Automotive Engineers (SAE) has established a new international standard (J3016)[4] that provides a classification system for vehicle automated driving systems. There are six levels of driving automation which span from no automation (Level 0) to full automation (Level 5).

A brief overview of the SAE levels of automation is provided below:

- **Level 0:** Human driver monitors the driving environment and performs full driving tasks.
- **Level 1:** Human driver monitors the driving environment while the driver assistance system executes either the steering or acceleration/deceleration tasks for a specific driving scenario.
- **Level 2:** Human driver monitors the driving environment while the driver assistance system executes both the steering and acceleration/deceleration task for a specific driving scenario.
- **Level 3:** Automated driving system monitors the driving environment and executes all aspects of the driving tasks for a specific driving scenario, with the expectation that the human driver will respond appropriately to a request to intervene.
- **Level 4:** Automated driving system monitors the driving environment and executes all aspects of the driving tasks for a specific driving scenario, even if the human driver does not respond appropriately to a request to intervene.
- **Level 5:** Automated driving system monitors the driving environment and executes all aspects of the driving tasks for all driving scenarios.

The key distinction is between Level 2, where the human driver monitors the driving environment and performs part of the dynamic driving task, and Level 3, where the automated driving system monitors the driving environment and performs the entire dynamic driving task. That distinction is important as it leads to the potential for two different AV ownership models (described above), individual or shared. Both ownership models (and the proportions of each) will provide different new opportunities and challenges for transportation networks.

3 KEY PRIVATE AND PUBLIC PLAYERS

There are many players who play a role in shaping the autonomous vehicle scene[5]. Google, Uber, most major automakers, and other organizations are investing significantly in the advancement of driverless technology. Additionally, many research institutions are partnering with automakers to provide research support, validation, and testing sites. Several universities are also studying the ethical questions associated with driverless cars (e.g. how to determine who gets harmed versus saved in an unavoidable collision).

Some of the key players involved in the autonomous vehicle industry include:

- **Automakers** – Nissan, Mercedes, Tesla, Daimler, Ford, Volvo, Audi;
- **Technology Providers** – Google, Uber, Apple, Alibaba, Baidu, Easy Mile, Navya;
- **Research Institutions** – Multiple engineering colleges in Canada and the US;
- **Manufacturing** – A range of hardware systems providers;
- **Insurance Agencies** – Establishing ramifications of fault;
- **Legal Advisors** – Crafting the laws surrounding autonomous vehicle use;
- **Federal Government** – Supports research on safety and policies around CAVs;
- **State and Provincial Governments** – Jurisdictional legislation enabling testing and use and any need for special licensing; and
- **Local and Regional Governments** – Mostly looking to understand the implications of the technology on bylaws, enforcement, and infrastructure. Also, provide testing locations.

Automakers and technology providers are pushing the technology into uncharted territory, from a legal and technological standpoint. Audi has announced the new A8 sedan, its luxury flagship, which is anticipated to be the first Level 3 autonomous vehicle in Canada and may be released as early as 2018. Some companies don't see a way to make Level 3 vehicles safe, due in large part to the issue of the handoff between automated system and driver. As a result, companies like Volvo, Ford, and Google are opting to target Level 4 production. Experimental programs and permits in Ontario current require vehicles with an automated system of at least Level 3.

4 OVERVIEW OF CURRENT LEGISLATION AND PROGRAMS

The introduction of a more integrated transportation mobility environment raises questions about what this disruption will mean for the transportation industry. Base engineering assumptions such as lane widths, roadway cross sections, and merge lane lengths may need to be reconsidered. How streets are designed may need to be changed, taking into account the possibility of reduced demand, changes to parking requirements, and AV demands for enhanced information technology (IT) infrastructure.

In order to proactively prepare for these changes, policies and programs are currently being initiated federally and provincially to prepare for CAV technology. Policymakers have identified that Ontario provides an excellent opportunity to lead in the development and application of CAV technology because of its strength in the information, communication, technology, and automotive industries, together with its extensive transportation infrastructure.

4.1 Province of Ontario Legislation

On January 1st, 2016, Ontario became the first province in Canada to pilot an on-road test program for automated vehicles and related technology. This pilot was initiated to facilitate investment and development in Ontario. The pilot applies to vehicles of SAE levels 3, 4, or 5 and outlines requirements for monitoring by a driver, insurance, and reporting to Ministry of Transportation, Ontario (MTO)[6].

Highlights of the Ontario's current (2016) AV pilot regulations include:

- Vehicles are restricted to testing purposes only;
- A 10-year duration for the pilot, including interim evaluations;
- Only vehicles manufactured and equipped by approved applicants are permitted;
- The driver must remain in the driver's seat of the vehicle at all times and monitor the vehicle's operation;
- The driver must hold a full class licence for the type of vehicle being operated;
- Eligible participants must have insurance of at least $5,000,000;
- All current Highway Traffic Act rules of the road and penalties will apply to the driver/vehicle owner; and
- Vehicles must comply with SAE Standard J3016 and any requirements of the Motor Vehicle Safety Act (Canada) that apply to automated driving systems for the vehicle's year of manufacture.

On December 21st, 2017, the MTO engaged stakeholders via Ontario's Regulatory Registry[7] and proposed amendments to the AV pilot regulation[8]. These proposed enhancements to the AV pilot program are to:

- **Permit driverless testing of AVs.** The testing of AVs as part of the pilot through additional application requirements, such as a law enforcement and work zone interaction plan and alerting local municipalities of AV testing.
- **Expanded data reporting requirements.** Pilot participants would need to indicate the SAE level of the AV tested, annual reports on unplanned or non-scheduled disengagements, in-vehicle telematics (e.g. hours tested, distanced travelled, speed, harsh braking, etc.), weather conditions, and road types.
- **Permit public registration of SAE Level 3 AVs.** This would include Original Equipment Manufacturer (OEM) AV technology eligible for sale in Canada, not aftermarket and/or AV conversion products. The MTO expects SAE Level 3 AVs to be commercially available in the near future. MTO communications will include updated beginner driver education handbooks and outreach to auto industry stakeholders to leverage the availability of safety information to consumers.
- **Permit cooperative truck platoon testing.** A new pilot (within the existing AV pilot) that allows the testing of cooperative truck platooning with a driver present in each vehicle, under strict conditions and along specified routes. Cooperative truck platoons utilize a form of adaptive cruise control with V2V communication that allows for closer following distances and improved efficiencies.

The effective date of the above-proposed amendments described above is unclear at the time of writing.

4.2 Ontario Centre of Excellence

Encouraging development partnerships has been recognized as an important step in preparing for AVs. The Ontario Centre of Excellence (OCE) has rolled out a Connected Vehicle / Automated Vehicle Program that encourages partnerships between companies, and/or partnerships between companies and academic research teams to develop and commercialize innovations in CAV technologies that focus on projects demonstrating strong potential for commercialization. With this phase of the program, OCE will allocate $2,000,000 leveraged by matching contributions from small, medium and large companies[9].

4.3 Autonomous Vehicle Innovation Network

In November 2017, the Province of Ontario launched the Autonomous Vehicle Innovation Network (AVIN), investing over $80 million over 5 years[10]. The AVIN programs focus on supporting the development and demonstration of CAV technologies, transportation infrastructure, intelligent transportation systems (i.e. the City's current TIMMS project), and transit-supportive systems and vehicles in Ontario.

The AVIN has five main objectives[11]:

- Commercialize C/AV and transportation and infrastructure system technologies;
- Build awareness, educate and promote Ontario as a leader;
- Encourage innovation and collaboration;
- Leverage Ontario talent; and
- Support regional auto brain belt clusters.

4.4 Ontario Good Roads Association

In November 2016, the Ontario Good Roads Association spearheaded the creation of the Municipal Alliance for Connected and Autonomous Vehicles in Ontario (MACAVO). This alliance between municipalities across Ontario actively promotes the testing and integration of CAVs within our communities in an effort to have all jurisdictions work together. This provides MACAVO members with the opportunity to learn from each other and develop a synchronized set of logistics, policies, and communication channels to help the CAV industry move forward in Ontario while integrating with municipal services[12].

Presently (as of March 2018)[13], MACAVO is actively engaging Ontario municipalities to develop a preliminary transportation network that is supportive of the preferred use of SAE Level 4 and 5 CAVs. The vision is to develop a province-wide CAV corridor between Windsor and Ottawa with seamless transitions between municipalities. Once achieved, this would be the first and largest CAV corridor developed in the world with anticipated socio-economic and Vision Zero benefits.

Following the establishment of a designated Windsor-Ottawa CAV corridor and network supportive of fully autonomous vehicles, next steps facilitated by MACAVO in preparation for CAVs may include:

- Engaging automobile and original equipment manufacturers (OEMs);
- Engaging the Ontario Provincial Police (OPP) and other municipal authorities;
- Engage the OCE, AVIN, universities and other development networks;
- Identify special transportation network features required for CAVs; and
- Identify data sharing and security.

4.5 Institute of Transportation Engineers

In April 2018, the Institute of Transportation Engineers (ITE) released a Position Statement on CAVs in light of recent safety concerns that highlights the current state of the technology with the understanding that these positions should evolve over time[14].

A summarized version of these key tenets include:

- The support that zero fatalities and serious injuries (i.e. Vision Zero objectives) can only be achieved through CAV technology;
- Caution that loosely regulated deployment of CAVs risks innocent lives;
- The support for the rapid adoption of safety assist (SAE Level 1) technologies;
- Caution that current SAE Level 2 and 3 technologies requiring driver monitoring have not yet been proven safe for general use in all environments;
- SAE Level 4 systems are the most appropriate as an objective for “driverless vehicles”; and
- Cooperative systems achieved through communication between vehicles, infrastructure, and other users will provide an enhanced layer of safety and must be pursued.

4.6 Canadian Urban Transit Association

The Canadian Urban Transit Association (CUTA) published *Transit Vision 2040* to provide guidelines for optimizing mobility and transit in Canadian society. One of the strategic directions presented in the publication advised cities to prepare for connected and automated vehicles[15]. The City of London has the opportunity, as a municipality, to create policies and pilots that prepare for CAVs, including V2I, V2V, V2X, and “Internet of Things” (IoT) technologies.

4.7 Canadian Urban Transit Research and Innovation Consortium

The Canadian Urban Transit Research and Innovation Consortium (CUTRIC) is currently leading projects with CAV components, the most notable of which is the National Smart Vehicle Demonstration and Integration Trail[16]. This project plans to integrate semi-autonomous and (eventually) fully autonomous, connected, and electric vehicle shuttles/pods and buses across up to 12 Canadian municipal jurisdictions as “first-mile / last-mile” applications.

The primary project objectives of the National Smart Vehicle Demonstration and Integration Trail are the development of:

- Standardized V2V and V2I communication protocols;
- Interoperability standards for electric low-speed autonomous shuttle (e-LSA) manufacturer equipment; and
- Standardized cybersecurity protocols.

Another related report developed by CUTRIC for Industry Canada in 2015 entitled “Automotive and Transportation Innovation Across Canada and Regional Transportation Needs and Capacities as Targeted Research, Development, and Demonstration Projects”[17]. This report included a high-level examination of CAV systems such as sensors, signalling, controls, and communications security.

4.8 National Operations Center of Excellence

Under the banner of the National Operations Center of Excellence (NOCoE), the American Association of State Highway Transportation Officials (AASHTO), the Institute of Traffic Engineers (ITE), and ITS America (ITSA) are working together through the Vehicle to Infrastructure Deployment Coalition (V2I DC) have challenged municipalities to work together to achieve deployment of roadside radio infrastructure to broadcast signal phase and timing (SPaT) in real-time at signalized intersections on at least one road corridor or street network in each of the 50 states by January 2020[18].

As of April 2018, nearly 40 municipalities had engaged the SPaT Challenge with 10 corridors operational, including Detroit, Pittsburgh, San Francisco, Phoenix, and Las Vegas.

5 CAV PROJECTS IN SIMILAR MUNICIPALITIES

The City of London can look at what steps other municipalities have taken towards preparing for autonomous vehicles on city streets. Several examples of municipalities who are investigating and pursuing steps that would take them towards policy and pilot projects that would provide long-term CAV benefits to their communities.

5.1 ACTIVE-AURORA

Launched in 2014, ACTIVE-AURORA is the first network of test beds for CVs in Canada, with ACTIVE based in Edmonton, Alberta, and AURORA based in Vancouver, British Columbia. This testbed implements CV technology enabling vehicles to wirelessly "talk" to other vehicles and roadside infrastructure in real time, communicating information such as location, speed, following distance, inclement weather, adverse road conditions, and more.

This project provides real-world test zones, combined with laboratory settings, where conditions can be customized to simulate various situations. These facilities offer cutting-edge learning opportunities and hands-on experience for the next generation of transportation experts.

5.2 City of Calgary

At the June 26, 2017 meeting of the Standing Policy Committee (SPC) on Transportation & Transit, City of Calgary Council resolved that Administration in collaboration with regional stakeholders prepare a business case and risk assessment to evaluate the merits of testing autonomous vehicles on Calgary's roadways and region.

At a follow up SPC meeting on December 8, 2017, Administration responded with a Business Case and Risk Assessment and recommendations were carried to direct the report to the Province of Alberta to enact legislation allowing the testing of AVs; and, direct Administration to establish an intake process for using City-owned assets that support the economic development of the autonomous systems industry in Calgary.

5.3 City of Edmonton

The City of Edmonton's Transportation Committee passed a motion on May 27, 2015, directing Administration to report on the steps that are being taken to stay informed and educated on autonomous vehicles and the potential impacts to the roadway and transit network. The Administration responded on September 16, 2015, with a report that outlined the City of Edmonton's position and Council directed Administration to follow up with Q4 Annual Reports each year. These were subsequently presented by Administration in 2016 and 2017.

The September 2015 report outlined that the City is a member of University of Alberta's Center for Smart Transportation Steering Committee which has created a connected vehicle test bed for testing real-time information exchange between vehicles and roadside equipment. The Center also conducted a survey to gauge Edmontonian's interest in connected vehicles. The City of Edmonton is also undertaking an assessment of the implications of automated vehicles on traditional road engineering principles such as capacity, demand, parking, and land use.

Under the ACTIVE-AURORA project, ACTIVE currently includes 30 advanced roadside equipment units in Edmonton along 3 corridors that will establish wireless connections with onboard equipment in passing test vehicles. These test beds will provide a harsh winter environment in which to test CV systems and their impact on the transportation system (e.g. safety, mobility, and the environment).

5.4 City of Pittsburgh

The City of Pittsburgh is the first City to have a self-driving ride-sharing service on their streets. Through a partnership with the City of Pittsburgh, Volvo, and Uber, residents of Pittsburgh can now hail a self-driving Uber. The vehicles will also come with a safety driver in the driver's seat to take over if necessary. This pilot project has been allowed to move forward because of support received from City Administration. The City of Pittsburgh helped Uber lease a large plot of land for a testing track and successfully fought against potential state regulation that would ban ride-sharing services.

As of writing, Uber has suspended its self-driving operations in Tempe, Pittsburgh, San Francisco, and Toronto following the recent fatality in Phoenix in March 2018.

5.5 City of Stratford

The City of Stratford (located less than 1 hour from the City of London) put forth a bit to become Ontario's first live test bed for driverless cars in 2016. In 2017, the AVIN launched a unique demonstration zone (among the first of its kind in Canada) that will allow researchers to hone the technology and test CAVs in a wide range of everyday, real-life transportation scenarios. The necessary CAV technologies for pilots will be developed at various locations across Ontario before arriving at Stratford for testing[19].

5.6 City of Toronto

The City of Toronto's Public Works and Infrastructure Committee gave direction on May 16, 2016, to the General Manager of Transportation services to report back to the Committee with recommendations on how the City of Toronto could prepare for the arrival and expansion of autonomous vehicle technology.

At the City's January 5, 2018, Public Works and Infrastructure Committee meeting, Administration provided a report for action to prepare the City of Toronto for AVs. The report outlines next steps proposed, including the development of a cross-divisional policy position to ensure preparedness amongst all City services; and, the deepening of partnerships, including formal membership in the Municipal Alliance for Connected and Autonomous Vehicles in Ontario (MACAVO) and support for the University of Toronto's proposed iCity Centre for Automated and Transformative Transportation Systems.

In 2018, the City's Transportation Services division will implement the final year of the "Preparing for Autonomous Vehicles" work plan, focusing on the relationships between infrastructure and automation. The City may be able to influence the areas where activities related to automation are more likely to occur through policies such as parking, traffic, and curbside management. Concurrently, the City will continue to look at the broader picture of how highly automated vehicles can help achieve broader social, environmental, and economic goals[20].

5.7 Waterloo Centre for Automotive Research

The Waterloo Centre for Automotive Research (WatCAR) is located within Stratford's Connected City. WatCAR hosts research competencies in five (5) main areas[21]:

- Connected and autonomous vehicles;
- Lightweight and fabrication;
- Powertrain and emissions;
- Software and data; and
- Structures and safety.

6 POSITIVE AND NEGATIVE IMPACTS

There are many unknowns and changes as CAV technology progresses and different manufacturers innovate. Questions with significant implications are being asked about the effects of this technology on society[22].

The potential impact of driverless vehicles is vast, with both positive and negative implications. The extent of these impacts will largely be driven by government policy. Potential positive impacts related to CAVs include:

- **Improved public safety.** This is the largest positive impact, with the potential elimination of 90% of automobile accidents that are caused by human error.
- **Improved mobility for the elderly, disabled and youth.** CAVs are a benefit to groups with difficulties getting regular access to transportation.
- **Improved traffic circulation.** Assuming a 90% market share of driverless vehicles, freeway congestion could reduce by as much as 60% due to shared-use daily commutes. Also, traffic circulating on public streets looking for available parking currently accounts for 30% of city traffic. That could potentially be eliminated with shared driverless vehicles.
- **Reduced need for parking.** Self-driving fleets will reduce the need for on-street parking due to ridesharing and vehicle sharing. It is further expected that curbside space in downtowns will need to be reconfigured to have more loading/unloading zones and shared vehicle parking.
- **Improved personal mobility options and reduced personal mobility costs.** Each new self-driving taxi added to the fleet eliminates the need for about 10 privately owned cars. Essentially, people's mobility options will be increased substantially, so the need to own a private vehicle will be less necessary. Among other opportunities, driverless cars could provide first mile/last mile transit solutions.
- **Reduced emissions.** A self-driving, electric taxi in 2030 would produce 90 percent lower greenhouse gas emissions (GHG) than a 2014 gasoline powered privately owned vehicle, and 63 to 82 percent fewer GHG emissions than a 2030 privately owned vehicle with a hybrid engine.
- **Increased road capacity and throughput.** The ability to constantly monitor surrounding traffic and respond with finely tuned braking and acceleration adjustments should enable CAVs to travel safely at higher speeds and with reduced headway (space) between each vehicle. Research indicates that the platooning of autonomous vehicles could increase lane capacity (vehicles per lane per hour) by up to 500 percent.

Potential negative impacts related to autonomous vehicles include:

- **Increased vehicle kilometres travelled (VKT).** Additional VKT increases may be realized from induced demand as travel costs fall and greater access to travel options occurs. A latent demand for travel also exists that will be realized with the availability of CAV fleets.

- **Increased urban sprawl.** Regardless of the mode of available travel, people tend to live an average of 25-30 minutes from where they work. It is predicted that driverless vehicles could travel up to 190 km/h on major highways. For this reason, and the ability of people to engage in activities in their vehicles other than driving, it is likely that people will be willing to live even farther from where they work, which could result in reduced access to public services, increased infrastructure requirements, and reduced farmland/natural land.

- **Job loss.** Almost 1 million people are employed in motor vehicle and parts manufacturing. Additionally, truck, bus, delivery, and taxi drivers account for nearly 6 million jobs in Canada and the U.S. These jobs, and others could potentially be impacted by vehicles that do not need drivers. However, this would likely happen gradually and it is anticipated that many new jobs would also be created with the introduction of CAVs.

7 RECOMMENDATION: STRATEGIC PLAN

With the introduction of CAVs onto our streets, an autonomous vehicle strategy, as well as a framework for pilot projects, should be developed for the City of London. A policy based approach should be introduced to guide collaboration among transportation professionals, telecommunication providers, vehicle companies, and software technology companies in order to encourage innovation and incentivize development.

The development and introduction of a CAV Strategic Plan will encourage research and development to take place in London. The plan will create the basis and an environment that will allow for expanded employment opportunities through a local CAV supply chain and cultivate advances in the academic and the research and development sectors.

The City of London should consider potential policy implications and develop a CAV Strategic Plan that balances the many interests and issues at play. A number of the considerations that will be reviewed during the strategic plan development are presented below.

7.1 Infrastructure

The implications of autonomous vehicles on the infrastructure requirements should be considered by the strategic plan. There is a wide variety of CAVs being developed, some of which require no communication with infrastructure and could operate within the existing system while others would rely on significant communication with surrounding infrastructure[23]. This potentially means a policy would be required to guide the replacement of existing systems with costly smart infrastructure (physical and digital) that can communicate with these vehicles. With the additional infrastructure technology, the life cycle renewal of the infrastructure could be changed.

7.2 Land Use

The widespread adoption of autonomous vehicles could result in a change to the current land use practices. There is the potential for CAVs to make driving more desirable and may create a willingness to commute longer distances. Potential narrowing of right-of-way requirements and a reduced need for parking infrastructure could create the opportunity to repurpose land and reconsider zoning policies. The CAV Strategic Plan should review current land use policies and recommend changes to adapt to how transportation services are delivered and utilized.

CAVs are expected to create demand for drop-off areas that are as close as possible to the entrances of destinations. These drop-off areas will impact site-level design and affect access management in the form, location, design of curb cuts, and drop-off/loading areas.

Reducing parking and narrowed right-of-ways will yield substantial redevelopment opportunities in urban areas dominated by surface parking and wide roadways.

7.3 Transit

One of its greatest advantages of transit is its adaptability. Service is adaptable in terms of network scope and ridership demands. Transit is a major component of mobility. Electric vehicles, autonomous technology, and driverless shuttles could all combine to create a new vision of what transit service looks like.

City travel is dominated by the private car, traffic congestion is now widely recognized as a major and growing urban transportation problem. The fundamental need to move people rather than vehicles will remain. Traffic congestion is likely to remain fairly constant, where the demand to move people will meet or exceed the physical capacity of the road network.

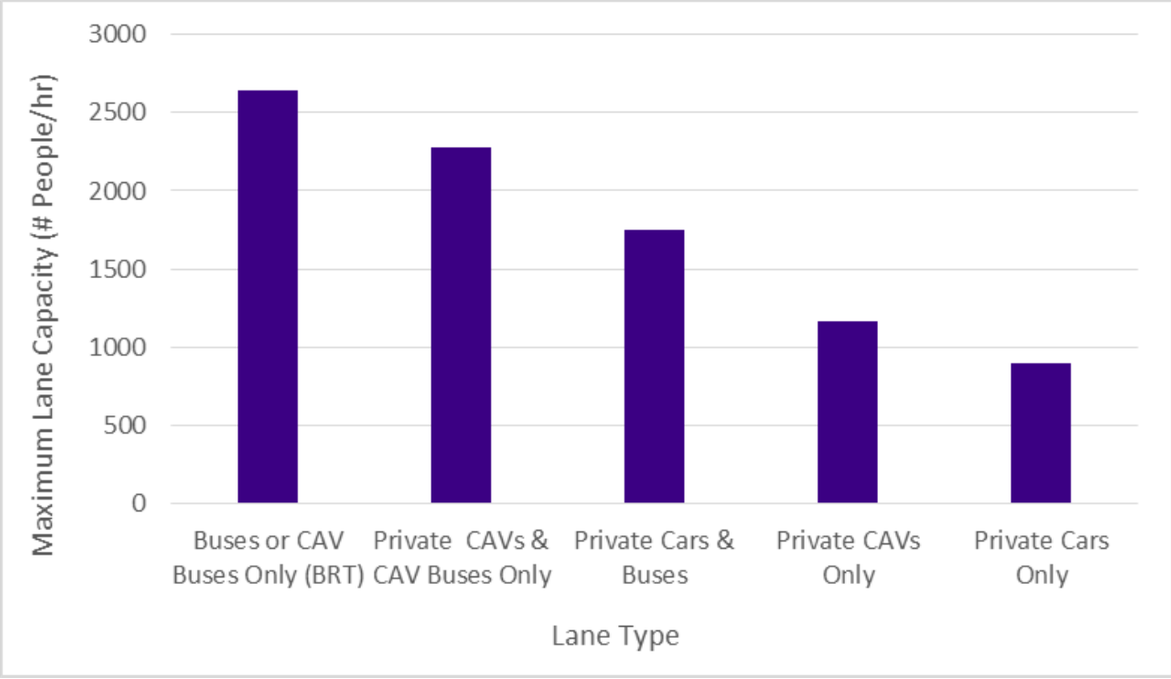
Declining vehicle occupancy and the fact that AVs can run empty suggest there is potential for AV traffic to increase, not decrease, congestion in cities of the future. Given the limitation in roadway space, integrated mobility with mass transit at its core will be fundamental in moving people, since it has the highest vehicle occupancy and the largest capacity to carry large volumes of people efficiently in growing busy cities.

The adaptation of CAV technology may lead to changes in the designation of space in public rights of way.

Large-scale rapid transit systems (i.e. BRT or LRT) in dedicated lanes have the flexibility to control what types of vehicles can use the dedicated lanes, and when, and to leverage the infrastructure to optimize operations as technology evolves.

As CAV technology evolves, it is reasonable to consider a future where driverless vehicles connect to rapid transit stops, or public transit vehicles have the ability to be dynamically routed to pick up passengers without necessarily following the same route every time.

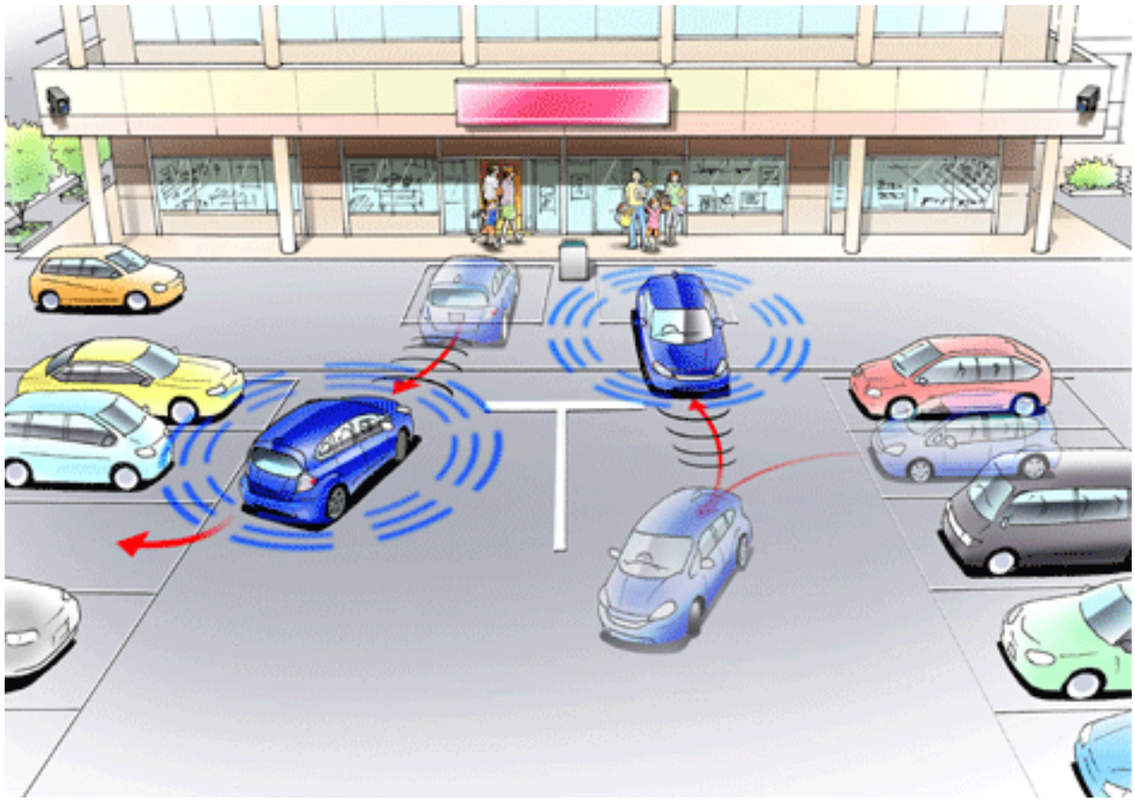
The following graphic shows the maximum person-carrying capacity of a lane for various vehicle types, including CAV technologies. Dedicated lanes for transit or other high-occupancy vehicles will continue to be a solution that enables a higher person movement capacity, and a more rapid flow of people along corridors where travel demand is high.



At the present time, the majority of larger on-street AVs being developed and tested are shuttles that can hold 10-12 people on average, and operate at average speeds of 20-25 km/h. These shuttles are almost exclusively electrically-powered with lithium batteries. Testing occurs mostly in low-traffic areas like business parks or university campuses, on fixed routes of only a few kilometres.

Coordination of the interaction between mass transit and CAV mobility providers to ensure that an integrated mobility model, which moves the largest amount of people, will be the key to ensuring congestion is managed in the future.

7.4 Parking



The implementation of CAV technology may affect conventional parking strategies. The technology may increase deadhead parking trips and parking in undesirable areas. This may also result in a loss of on and off street parking revenue. The CAV Strategic Plan should consider how the shifts of costs and revenues can be rebalanced given the effect CAVs may have on the parking framework.

Municipalities need to recognize and plan for changes in parking demand by identifying long-run opportunities for AV parking structures or large surface lots away from city centres, revising codes for parking requirements, and incorporating parking areas into comprehensive plans and other planning documents.

7.5 Accessibility

CAVs could expand accessibility for people who cannot drive due to disability, age, or other barriers. If CAV ownership follows the shared use model, a proactive policy may be required to ensure accessibility, especially for those who might need additional accommodation (such as wheelchair ramps or lifts). Without some proactive policy responses, automation of transportation could risk widening rather than shrinking the mobility gap for some persons with disabilities.

7.6 Safety

CAV technology has the potential to improve safety for all road users. SAE Level 1 vehicles today have features such as lane departure warnings, dynamic cruise control, etc. to assist drivers. Additional research, development, and testing should improve CAVs to detect and respond accordingly to all types of emergency situations.

The MTO pilot project requires that a human driver be able to take over the driving operations. This is an important first step on the road to SAE Level 5 CAVs until the technology has been tested and proven. In order to fully achieve the safety features of CAVs, there will need to be a critical mass of SAE Level 5 CAVs versus traditional vehicles.

7.7 Privacy and Security

Privacy and data security issues will always be a concern for consumers. The CAV Strategic Plan should consider how these concerns can be addressed while still delivering a safe and reliable product. In addition to the general public's concerns, the integration of CAVs into existing municipal systems (e.g. traffic signal systems, physical roadway infrastructure, etc.) raises other privacy and security issues. The CAV Strategic Plan should specify how municipal data is shared with third-party CAV original equipment manufacturers (OEMs) and mobility service providers so that it is done in a secure manner. It should be noted that privacy and security issues will be an on-going component and the CAV Strategic Plan needs to able to adapt to these evolving systems as they emerge.

7.8 Public Awareness and Education

Lastly, public awareness and education is an important element in the adoption of CAVs in our community. Public outreach can easily target all positive and negative impacts of CAVs depending on the educational message. Public education about the safety, congestion, mobility, privacy safeguards, and environmental implications of CAVs could affect technology adoption and market acceptance. Consumer awareness could lead to the use of a shared ownership model for CAVs rather than an individual ownership model, which could have congestion, mobility, and environmental advantages[24].

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[23] Mowat Centre, University of Toronto, "Robot, take the wheel: Public policy for automated vehicles", University of Toronto, 2016.

[24] Transportation Research Board, “NCHRP 845: Strategies to Advance Automated and Connected Vehicles: Briefing Document”, 2017-October.

TO:	**CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018**
FROM:	**KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER**
SUBJECT:	**TENDER T18-48 SUPPLY AND INSTALLATION OF SEWER LINERS CURED IN PLACE PIPE (CIPP)**

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to Tender T18-48:

a) The bid submitted by Insituform Technologies Limited at its tendered price of $3,343,421.00 (HST excluded), **BE ACCEPTED,** it being noted that the bid submitted by Insituform Technologies Limited was the lowest of three (3) bids and meets the City's specifications and requirements in all areas;

b) the financing for this project **BE APPROVED** as set out in 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 approval given, herein, **BE CONDITIONAL** upon the Corporation entering into a formal contract, or issuing a purchase order for the material to be supplied and the work to be done, relating to this project (Tender T18-48); and

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

2015-19 STRATEGIC PLAN

The 2015 – 2019 Strategic Plan identifies this objective under Building a Sustainable City; 1B – Manage and improve our water, wastewater and stormwater infrastructure and services.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

None

BACKGROUND

Purpose

To award the annual contract to supply and install cured in place pipe (CIPP) sewer liners.

Context

The City of London uses trenchless sewer repairs, where appropriate, to repair damaged sewers without having to perform open cut construction. CIPP repairs involve inserting a resin filled felt or fiberglass tube into a sewer, inflating the tube and adding heat (via steam or hot water) or UV light to cure the resin. Once the resin cures, the tube has formed into a tight fitting pipe within a pipe. The result is a “new” sewer with a life expectancy of 50+ years.

DISCUSSION

The City of London’s annual sewer lining program uses trenchless technologies to reinstate and extend the life of existing storm and sanitary sewer infrastructure. This program avoids the large capital costs of open-cut construction by using cost effective trenchless technology. The installation of a liner can be completed in several days as compared to months for open cut repairs greatly reducing the social impacts.

The City of London began installing full-length sewer lining repairs in 1989. Beginning in the late 1990s the sewer lining program was expanded and became an important part of London’s capital renewal strategy. Since 2007 there have been over 210km of liners installed.

The 2018 program includes 7.5km of storm and sanitary sewer lining along various streets throughout the city with pipe sizes ranging from 200mm to 1200mm. Some of the large diameter storm and sanitary sewers will require flow bypass to accommodate the lining. Streets to be lined in 2018 include:

- Hayes Street,
- Warren Road,
- Bathurst Street,
- Clarke Road, and
- High Street.

Purchasing Process

Three bids were received as a result of this tender call on March 1, 2018 as summarized below. Insituform Technologies Limited submitted the overall low bid and meets our terms, conditions and specifications in all areas.

	Contractor	Tender Price Submitted
1.	Insituform Technologies Ltd.	$3,343,421.00
2.	Capital Sewer Services Inc.	$4,160,792.00
3.	Clean Water Works Inc.	$5,199,395.00

The tender estimate prior to opening was $3,890,000.00 (excluding H.S.T.)

All tenders include a Contingency Allowance of $300,000.00. The value of this tender award is within the approved 2018 budget for this annual “Specialized Sewer Repairs” program. Funding for this project has been provided in ES269318.

Financial Impact

In 2015 a comprehensive analysis was undertaken to understand the annual cost savings achieved through the sewer lining program. When taking into account costs of pipe, labour, and appurtenances (ie. man holes, private drain connections, etc.), the annual cost savings in 2015 were approximately $4,300,000.

CONCLUSION

Civic Administration has reviewed the tender bids and recommends Insituform Technologies Limited be awarded the construction contact for the 2018 Cured in Place Pipe program.

The sewer lining program continues to be an important part of the City’s sewer infrastructure renewal strategy. The ability to repair sewers with minimal above ground impact provides an opportunity to perform necessary repairs while limiting disruptions to the general public in an extremely cost effective manner.

ACKNOWLEDGEMENTS:

This report was prepared with assistance from Dave Jones, C.E.T., Technologist II and Brian Nourse, P.Eng., in the Construction Administration Division.

PREPARED BY:	REVIEWED & CONCURRED BY:
UGO DECANDIDO, P. ENG. DIVISION MANAGER, CONSTRUCTION ADMINISTRATION	**SCOTT MATHERS, P. ENG. DIRECTOR, WATER AND WASTEWATER**

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

Attach: Appendix “A” Sources of Financing

APPENDIX 'A'

#18094

Chair and Members
Civic Works Committee

May 28, 2018
(Award Contract)

RE: Supply and Installation of Sewer Liners Cured in Place Pipe (CIPP)
(Subledger WW180001)
Capital Project ES269318 - Specialized Sewer Repairs
Insituform Technologies Limited - $3,343,421.00 (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**
Construction	$4,700,000	$3,402,265		$1,297,735
NET ESTIMATED EXPENDITURES	**$4,700,000**	**$3,402,265**	**1)**	**$1,297,735**
SUMMARY OF FINANCING:				
Capital Sewer Rates	$4,700,000	$3,402,265		$1,297,735
TOTAL FINANCING	**$4,700,000**	**$3,402,265**		**$1,297,735**

1) **FINANCIAL NOTE:**

Contract Price	$3,343,421
Add: HST @13%	434,645
Total Contract Price Including Taxes	3,778,066
Less: HST Rebate	375,801
Net Contract Price	$3,402,265

JG

Jason Davies
Manager of Financial Planning & Policy

DEFERRED MATTERS

CIVIC WORKS COMMITTEE
(as of May 17, 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	
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	3rd 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.	101.	**2030 Smart Moves Transportation Master Plan** That the Civic Administration BE REQUESTED to provide an update on the 2030 Smart Moves Transportation Master Plan, including an overview of projects that have been completed so far and projects that are planned for future years.	March 19, 2018	May 2018	K. Scherr D. MacRae	
14.	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	

Cycling Advisory Committee

Report

6th Meeting of the Cycling Advisory Committee
May 16, 2018
Committee Room #4

Attendance

PRESENT: D. Mitchell (Chair), D. Doroshenko, R. Henderson, J. Jordan, D. Szoller and M. Zunti and J. Bunn (Acting Secretary)

ABSENT: W. Pol, R. Sirois, and A. Stratton

ALSO PRESENT: J. Ackworth, M. Elmadhood, D. MacRae, B. McCall, A. Miller, M. Morris, R. Patterson, A. Spahiu and S. Wilson

The meeting was called to order at 4:01 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 Complete Streets Update

That it BE NOTED that the attached presentation from M. Morris, Engineer-in-Training, with respect to an update on the Complete Streets project, was received.

2.2 Adelaide Street and Canadian Pacific Railway Grade Separation Environmental Assessment Project – Update

That the Civic Administration BE ADVISED that the Cycling Advisory Committee supports the option of a raised cycle track, with the appropriate markings, with respect to the Adelaide Street and Canadian Pacific Railway Grade Separation Environmental Assessment Project; it being noted that the attached presentation from A. Spahiu, Transportation Design Engineer, was received, with respect to this matter.

3. Consent

3.1 4th and 5th Reports of the Cycling Advisory Committee

That it BE NOTED that the 4th and 5th Reports of the Cycling Advisory Committee, from the meetings held on March 21, 2018 and April 18, 2018, respectively, were received.

3.2 Municipal Council Resolution - 2018 Ontario Municipal Commuter Cycling (OMCC) Program

That it BE NOTED that the Municipal Council resolution from its meeting held on March 27, 2018, with respect to the 2018 Ontario Municipal Commuter Cycling (OMCC) Program, was received.

3.3 Municipal Council Resolution - 3rd Report of the Cycling Advisory Committee

That it BE NOTED that the Municipal Council resolution from its meeting held on March 27, 2018, with respect to the 3rd Report of the Cycling Advisory Committee, was received.

3.4 Notice of Project Commencement - Broughdale Dyke Municipal Class Environmental Assessment

That it BE NOTED that the Notice of Project Commencement from A. Spargo, AECOM Canada and P. Adams, AECOM Canada, with respect to a Schedule B Municipal Class Environmental Assessment (EA) Study related to the Broughdale dyke, was received.

3.5 Notice of Project Commencement - Riverview Evergreen Dyke Municipal Class Environmental Assessment

That it BE NOTED that the Notice of Project Commencement from A. Spargo, AECOM Canada and P. Adams, AECOM Canada, with respect to a Schedule B Municipal Class Environmental Assessment (EA) Study related to the Riverview Evergreen dyke, was received.

3.6 Notice of Public Information Centre 3 - Adelaide Street North/Canadian Pacific Railway Grade Separation - Municipal Class Environmental Assessment Study

That it BE NOTED that the Notice of Public Information Centre 3 from A. Spahiu, Transportation Planning and Design, City of London and J. Goldberg, Project Coordinator, WSP, with respect to the Adelaide Street North/Canadian Pacific Railway Grade Separation Municipal Class Environmental Assessment Study, was received.

3.7 Notice of Public Meeting - The Corporation of the City of London - Downtown

That it BE NOTED that the Notice of Public Meeting, dated April 11, 2018, from C. Parker, Senior Planner, with respect to the Official Plan, the London Plan and Downtown Plan criteria for Downtown Temporary Surface Commercial Parking Lots, was received.

3.8 Notice of Public Meeting - City of London - Old East Village

That it BE NOTED that the Notice of Public Meeting, dated April 11, 2018, from C. Parker, Senior Planner, with respect to an Official Plan Amendment application related to the Terms of Reference for the Old East Village Dundas Street Corridor Secondary Plan, was received.

3.9 Notice of Public Information Centre #2 - Southdale Road West Improvements - Pine Valley Boulevard to Colonel Talbot Road Municipal Class Environmental Assessment

That it BE NOTED that the Notice of Public Information Centre #2, from T. Koza, Project Manager, City of London and P. McAllister, Project Manager, AECOM, with respect to the Southdale Road West Improvements - Pine Valley Boulevard to Colonel Talbot Road Municipal Class Environmental Assessment, was received.

3.10 Notice of Planning Application - Zoning By-law Amendment - 1055-1075 Fanshawe Park Road West

That it BE NOTED that the Notice of Planning Application, dated April 25, 2018, from M. Knieriem, Planner II, with respect to a Zoning By-law Amendment for the property located at 1055-1075 Fanshawe Park Road West, was received.

3.11 Ontario Municipal Commuter Cycling Program - Project Information

That it BE NOTED that the Memo, dated April 10, 2018, from D. MacRae, Division Manager, Transportation Planning and Design, with respect to the Ontario Municipal Commuter Cycling Program Project Information, was received.

3.12 Downtown - OEV Bikeway Corridor Evaluation

That it BE NOTED that the Memo, dated May 9, 2018, from D. MacRae, Division Manager, Transportation Planning and Design, with respect to the Downtown - Old East Village Bikeway Corridor Evaluation, was received.

3.13 London Cycle Link - Letter of Apology

That it BE NOTED that a communication, dated April 8, 2018, from B. Lee, London Cycle Link, with respect to an apology related to an article published in the London Free Press that misrepresented the organization of London Cycle Link, was received.

4. Sub-Committees and Working Groups

None.

5. Items for Discussion

5.1 Municipal Council Resolution - Pedestrian Safety and Keeping Bicycles off of City Sidewalks

That the issue of public education with respect to cycling on sidewalks BE ADDED to the draft 2018 Cycling Advisory Committee Work Plan; it being noted that the Municipal Council resolution from its meeting held on April 10, 2018 and the communication from R. Millard and M. Ratcliffe, were received, with respect to this matter.

5.2 Municipal Council Resolution - 4th Report of the Environmental and EcologicalPlanning Advisory Committee

That it BE NOTED that the Municipal Council resolution from its meeting held on April 10, 2018, with respect to the 4th Report of the Environmental and Ecological Planning Advisory Committee, was received.

5.3 2018 Work Plan

That consideration of the 2018 Work Plan BE POSTPONED to the next Cycling Advisory Committee meeting.

5.4 Cycling Content on the City of London Website

That it BE NOTED that the a verbal delegation from A. Miller, Co-ordinator Transportation Demand Management, with respect to Cycling Content on the City of London website, was received; it being noted that Cycling Advisory Committee members have until May 28, 2018 to provide comments to A. Miller related to this content.

5.5 2018 Ontario Bike Summit

That it BE NOTED that the revised attached submission, dated April 9, 2018, from R. Henderson, with respect to the 2018 Ontario Bike Summit, was received.

6. Deferred Matters/Additional Business

6.1 (ADDED) Notice of Public Meeting - Zoning By-law Amendment - 1055-1075 Fanshawe Park Road West

That it BE NOTED that consideration of the Public Meeting Notice, dated May 9, 2018, from M. Knieriem, Planner II, with respect to the properties located at 1055-1075 Fanshawe Park Road West, was deferred until the next meeting due to loss of quorum.

6.2 (ADDED) Notice of Planning Application - Zoning By-law Amendment - 147-149 Wellington Street and 253-257 Grey Street

That it BE NOTED that consideration of the Notice of Planning Application, dated May 9, 2018, from M. Corby, Senior Planner, with respect to the properties located at 147-149 Wellington Street and 253-257 Grey Street, was deferred until the next meeting due to loss of quorum.

7. Adjournment

The meeting stood adjourned at 6:39 PM due to lack of quorum.

Review of the Forthcoming City of London Complete Streets Design Manual

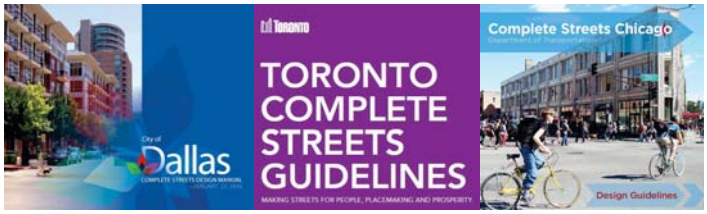
Presentation to Cycling Advisory Committee
May 16, 2018

Introduction - What are Complete Streets?

> A complete street is one that is designed to accommodate the mobility needs of **all ages, abilities, and modes of travel**. Safe and comfortable access for **pedestrians, bicycles, transit users, and the mobility challenged** are not design after-thoughts, but are **integral to the planning of the street** from the start.
>
> - London Transportation Master Plan

Introduction – Complete Streets Manuals

Complete Streets Guides & Manuals have been developed by **many cities around the world** to help **direct and coordinate** street planning/design towards more balanced mobility options



Background

The 2016 City of London Official Plan introduced a group of **Street Classifications**, which set the stage for more **context sensitive city building policies** and **redefining mobility** for Londoners

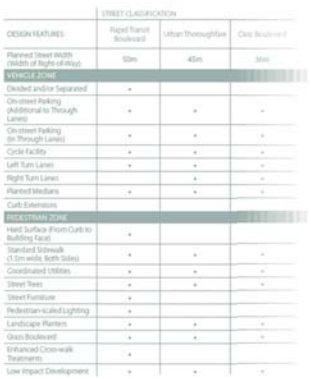
Classifications Include:

- Rapid Transit Boulevards
- Urban Thoroughfares
- Civic Boulevards
- Main Streets
- Neighbourhood Connectors
- Neighbourhood Streets
- Rural Thoroughfares
- Rural Connectors

THE LONDON PLAN
EXCITING. EXCEPTIONAL. CONNECTED.

Background

Each **Street Classifications** was accompanied with policies to guide future planning and design towards a an **intended character and function**, while progressing towards **overall mobility goals**



Background

Many stakeholders were included in consultation efforts for the development of the Complete Streets Design Manual and attended a **Stakeholder Workshop,** held on June 2nd, 2017. These groups included:

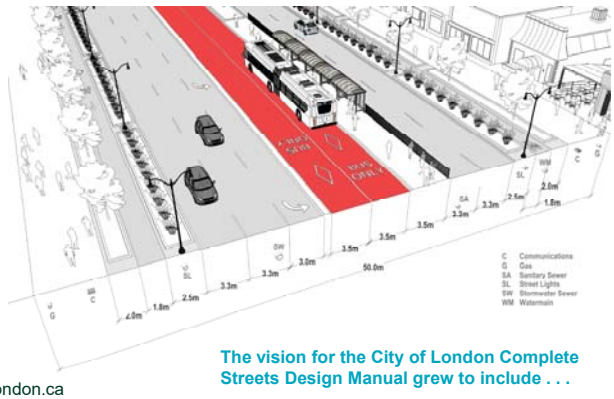
- Accessibility Advisory Committee
- Can-Bike
- Hyde Park Business Association
- Bell
- London Middlesex Road Safety Committee
- Middlesex Health Unit
- Start Communications
- Cycling Advisory Committee
- London Fire
- London Development Institute (LDI)
- Downtown London BIA
- London Hydro
- London Transit
- Union Gas
- Tree and Forests Advisory Committee
- Argyle BIA
- City of London Water
- London Environmental Network
- City of London Development Services

Goals

The City of London Official Plan suggested the preparation of a Complete Streets Manual to establish:

- Overall cross-sections for the street classifications
- Design parameters for the public realm

THE LONDON PLAN
EXCITING. EXCEPTIONAL. CONNECTED.



The vision for the City of London Complete Streets Design Manual grew to include . . .

London Complete Street Manual - Content

Chapter 1: Complete Streets: Vision and Principles
- Complete Streets concepts and policy support

Chapter 2: Elements of Complete Streets
- Complete Streets features

Chapter 3: Undertaking Complete Streets Design
- Processes for balancing the needs of current and future users

Chapter 4: Street Design for Roadways
- Street characteristics/priorities and conceptual cross sections, by street classification

Chapter 5: Street Design for Intersections
- Intersection treatments that provide Complete Streets elements for specific combinations of street classifications

Chapter 6: Moving Forward with Complete Streets
- Progress indicators for Complete Streets outcomes

Contents:

1. What are Complete Streets?
2. Who is This Guide For?
3. Review of Complete Streets Policies in London
4. Core Principles for Complete Streets

CHAPTER 1
COMPLETE STREETS: VISION AND PRINCIPLES

Local Policy Support

"At the local level, policy support for complete streets is found in a number of documents, including the:

- Strategic Plan
- The London Plan
- Downtown Plan
- Design Specifications and Requirements Manual
- Cycling Master Plan
- London Rapid Transit
- London Road Safety Strategy
- London 2030 Transportation Master Plan"

THE LONDON PLAN
EXCITING. EXCEPTIONAL. CONNECTED.

LONDON BIKES

COMPLETE STREETS: VISION AND PRINCIPLES

Local Policy Support

"Municipal Council adopted the following Vision Zero Principles:

- No loss of life is acceptable
- Traffic fatalities and serious injuries are preventable
- We all make mistakes
- We are all physically vulnerable when involved in motor vehicle collisions
- Eliminating fatalities and serious injuries is a shared responsibility between road users and those who design and maintain our roadways"

VISION ZERO LONDON
ROAD SAFETY STRATEGY

COMPLETE STREETS: VISION AND PRINCIPLES

Core Principles

Prioritize Safe and Accessible Options for People

Embed Sustainability

Emphasize Vitality

Prioritize Connectivity

Ensure Context Sensitivity

COMPLETE STREETS: VISION AND PRINCIPLES

Core Principles

Prioritize Safe and Accessible Options for People

> "The safety and mobility needs of all users is a priority in any street design exercise."

Embed Sustainability

Emphasize Vitality

> "Streets that attract pedestrians enhance urban vitality in London."

Prioritize Connectivity

Ensure Context Sensitivity

COMPLETE STREETS: VISION AND PRINCIPLES

Accessibility

The Manual defines what a pedestrian is, describes the central role of walking and mobility device travel within London and outlines how the City will support pedestrians through Complete Streets.

Key considerations:

- Tactile walking surface indicators
- Separation of pedestrians and cyclists where practical
- Consideration of user needs and land uses in prioritizing street elements such as sidewalk width
- Design processes that emphasize consultation with stakeholder groups
- Pedestrian crossing refuge islands
- Accessible transit stop design

COMPLETE STREETS: VISION AND PRINCIPLES

Contents:

General Considerations and Tools for:

1. Pedestrian Facility Design
2. Cycling Facility Design
3. Transit Facility Design
4. Motor Vehicles
5. Green Infrastructure
6. Utilities and Municipal Services

CHAPTER 2 ELEMENTS OF COMPLETE STREETS

Pedestrian Facility Considerations

Buffered bicycle lane in London.

Cycling Facilities Considerations

ELEMENTS OF COMPLETE STREETS

> **Provide connectivity:** As the slowest mode of transportation, pedestrians have the greatest sensitivity to route directness.

Buffered bicycle lane in London.

> **Prioritize vulnerable users:** Cyclists are more vulnerable than transit riders and motorists in a collision because they are not protected within a vehicle.

ELEMENTS OF COMPLETE STREETS

Design For Accessibility

"Pedestrians include those who are using a walker, crutches, a wheelchair or an electrically powered mobility device as well as individuals with a visual impairment.

Design features should be used to accommodate all of London's pedestrians, such as:

- appropriately wide pedestrian clearways;
- audible pedestrian signals;
- tactile walking surface indicators (TWSIs);
- visually contrasting surface treatments; and
- amenities such as seating

ELEMENTS OF COMPLETE STREETS

Contents:
(under development with City input)

1. Process Overview
2. Planning
3. Conceptualizing
4. Designing
5. Implementing

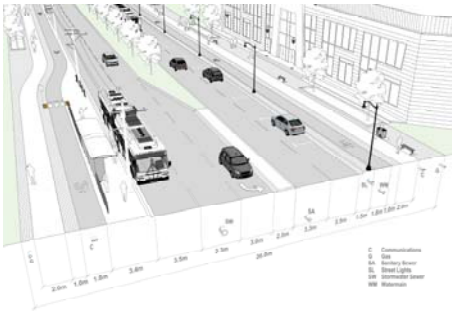
CHAPTER 3 UNDERTAKING COMPLETE STREETS DESIGN

Contents:

1. Street Typologies
2. Design Guidance for:
   - Rapid Transit Boulevards
   - Urban Thoroughfares
   - Civic Boulevards
   - Main Streets
   - Neighbourhood Connectors
   - Neighbourhood Streets
   - Rural Thoroughfares
   - Rural Connectors

CHAPTER 4 STREET DESIGN FOR ROADWAYS

Example
Civic Boulevard

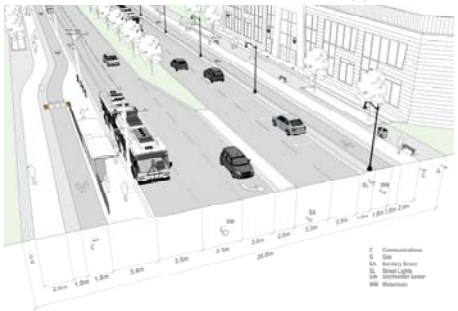


STREET DESIGN FOR ROADWAYS

"Physically separated and continuous cycling facilities are preferred."

Example
Civic Boulevard

"Civic Boulevards provide multi-modal connections between different neighbourhoods across the City including downtown."



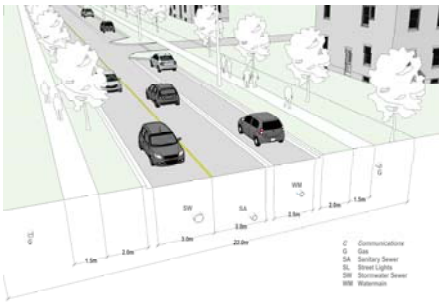
"The variety of destinations along these corridors can generate significant volumes of walking trips"

STREET DESIGN FOR ROADWAYS

"Link residential areas to the City-wide road network."

Example
Neighbourhood Connector

"Travel lanes may be reduced to 3.0 m, unless the street is part of a transit route."



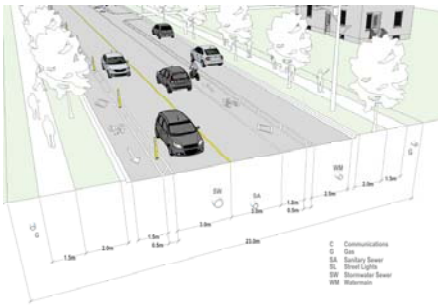
"Connectivity to key neighbourhood destinations can generate large volumes of pedestrian trips"

STREET DESIGN FOR ROADWAYS

"Link residential areas to the City-wide road network."

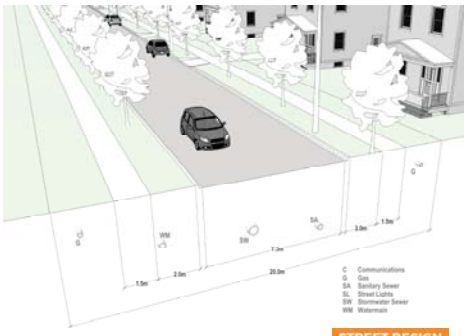
Example
Neighbourhood Connector

"Travel lanes may be reduced to 3.0 m, unless the street is part of a transit route."



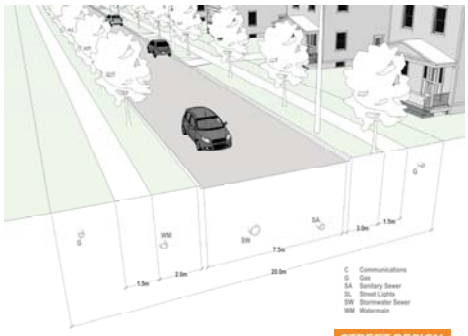
"Connectivity to key neighbourhood destinations can generate large volumes of pedestrian trips"

Example
Neighbourhood Street



Example
Neighbourhood Street

"Neighbourhood Streets are where most Londoners, including many families, live; enhancing the livability, sense of community, and the ability to age-in-place are important considerations."



"Benches and newspaper boxes are typically provided at corners with other major streets."

Contents:

CHAPTER 5
STREET DESIGN FOR INTERSECTIONS

Example
Rapid Transit Boulevard Intersecting a Main Street

STREET DESIGN FOR INTERSECTIONS

Example
Rapid Transit Boulevard Intersecting a Main Street

"The pedestrian clearway widens as the planter boxes and trees are discontinued, providing for greater ease of pedestrian movement and queuing."

"Centre median design requires dedicated transit signals which use the same phasing as the through motor vehicle movement."

STREET DESIGN FOR INTERSECTIONS

Contents:
(under development with City input)
1. Principles of Performance Metrics
2. Options for Measuring Complete Streets Performance

CHAPTER

6

MOVING FORWARD WITH COMPLETE STREETS

COMPLETE STREETS DESIGN MANUAL CITY OF LONDON

Next Steps

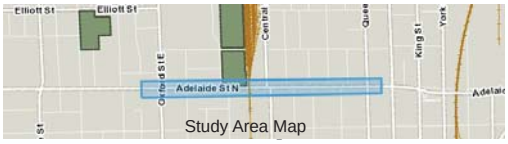
- Share Draft with Stakeholders and Finalize late summer 2018
- Education campaign
- Move towards a network of Complete Streets

Questions

Adelaide Street / Canadian Pacific Railway (CPR) Grade Separation EA

Study Background / Context

- ✓ City's highest priority new rail-road grade separation candidate site as per the **2005 Rail Exposure Index Study and 2013 Blockage Study**
- ✓ The **Smart Moves 2030 Transportation Master Plan and Development Charge Background Study (2014)** identifies needs for optimization and for the implementation of the grade separation in the 2031 planning horizon respectively.
- ✓ Subsequently, in 2017 Council approved moving project forward in a 3-5 timeframe.



Problems and Opportunities

Problems	Opportunities
• **Frequent train crossings** result in road being blocked significantly affecting vehicles, transit, cyclists and pedestrians	• **Separate rail traffic** from vehicles, cyclists and pedestrians on Adelaide Street, improving access and circulation
• Blockages result in significant delays and causes **cut-through traffic** onto local streets	• Provide **improved rail safety**
• Implementation of rapid transit on Richmond Street is expected to cause future **increase in traffic** on Adelaide Street	• Develop an **innovative design** that prioritizes pedestrians, cyclist and improves the urban environment, while avoiding some of the common drawbacks to underpasses
• Excessive delays will **increase idling time** and emissions loadings	• Preserve and **enhance the heritage character** of the neighbourhood and McMahen Park
• Uninterrupted road corridor needed for **emergency planning** and response	• Create **additional public space** that complements the area surrounding the new bridge and creates a strong connection from one side to the other for pedestrians and cyclists
	• Improve the surrounding streetscape and intersections to create a **safe, pedestrian-friendly and welcoming public space**

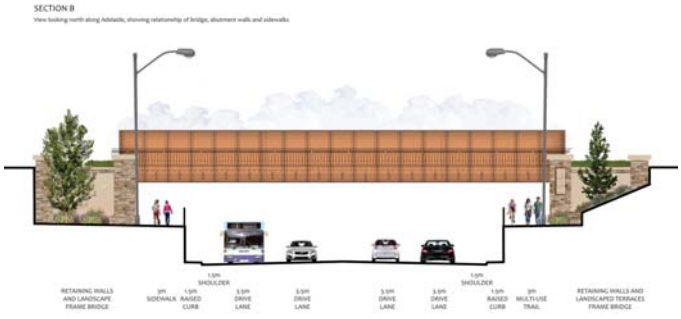
Preliminary Preferred Concept

An Underpass (road under rail) is preferred because:

- ✓ Has fewer overall property impacts
- ✓ Relatively little visual intrusion to the surrounding community
- ✓ Decreased traffic noise from the depressed roadway
- ✓ Provides more opportunity for a context sensitive design to respect the existing character of the roadway and adjoining neighbourhoods
- ✓ Maintains intersections with Central Avenue, Elias Street, Pall Mall Street and McMahen Street
- ✓ Is more attractive to pedestrians and cyclists
- ✓ Preferred by community

Preliminary Preferred Concept

Adelaide St Cross-Section



London On Bikes

- ✓ Approved Plan: http://www.londonbikes.ca/
- ✓ Adelaide St has no cycling facilities identified
- ✓ Central Avenue is an existing signed bike route
- ✓ Pall Mall is proposed for a signed bike route
- ✓ Colborne Street is the main north-south signed bike route in the Adelaide Street area
- ✓ Segments of Colborne Street are also proposed for signed bike route with sharrow and bike lanes
- ✓ Queens Avenue has existing bike lanes

Proposed Cycling Infrastructure

- The elevated Sidewalk/Multi-use facility in the proposed underpass are being designed to 3.0 m in width, to provide more operating space for cyclists.
- On Central Ave. where traffic volumes are very low, a reserved 1.5m wide bicycle lane (Fig. 2) is being proposed, with bike boxes at the intersection of Central/Adelaide (as appropriate).
- Consideration is being given to a Separated Cycling Facility (Fig. 3) on Adelaide St. within the grade separation limits.

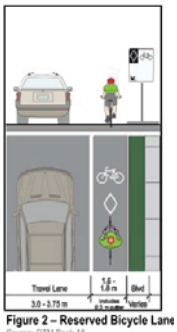


Figure 2 – Reserved Bicycle Lane

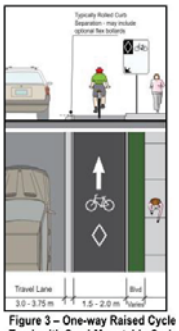
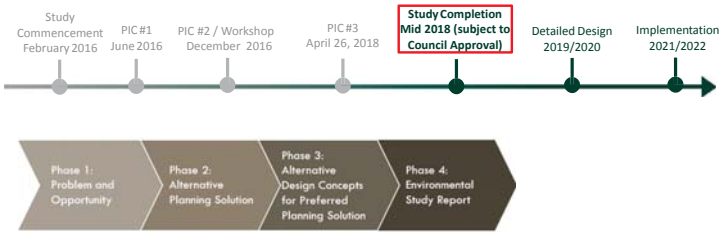


Figure 3 – One-way Raised Cycle Track with Semi-Mountable Curb

Project Timelines



Municipal Class EA Process

Questions?

https://getinvolved.london.ca/adelaide-streetcpr-grade-separation

2018 Ontario Bike Summit Report
April 16 – 18, 2018, Toronto

Prepared for: Cycling Advisory Committee
Date: April 9, 2018
Prepared by: Rebecca Henderson

1.0 Cycling Education Workshop – Ministry of Tourism, Culture and Sport

- Hon. Minister Daiene Vernile, Minister of Toursim, Culture and Sport, and Susan Golets, Director, Policy Branch, Ministry of Tourism, Culture and Sport, Recreation and Community Programs Division Director <Susan.Golets@ontario.ca>
- **Program Standards for Cycling Education** will be a provincially consistent and comprehensive cycling education program. Will be released later this year.
- Ontario strategy informed by **Bikeability UK.** Presentation by Nick Truran, Cycling Lead Officer <Nick.Truran@hertfordshire.gov.uk>

Currently in Ontario, cycling education is decentralized. A standardized program is one component of the Cycle ON 2.0 strategy (Ontario curriculum and active routes to school), and will focus on curriculum standards, program delivery, and cycling education programming.

Three Drafts:

1. **Program Standards for Cycling Education**. The Cycling Education Program Standards include a set of learning outcomes that describe the essential skills and knowledge a cycling participant must reliably demonstrate in order to graduate.
2. **Program Standards for Cycling Instructor Certification**. The Program Standards for Cycling Instructor Certification include a set of learning outcomes designed to equip cycling instructors with a strong knowledge of safe road cycling practices as well as with the ability to effectively share safe road cycling information to a diverse audience of cycling participants.
3. **Cycling Instructor Training Curriculum.**

<u>Considerations:</u>

What would drive and motivate people to use these standards? What is the best approach to implementing these standards? How can CAN-BIKE instructors be integrated into a provincially recognized instructor framework? What would be the key attributes of a third-party organization delivering the program? Opportunities/challenges in rural, remote and Northern communities?

2.0 Cycling Skills: Ontario's Guide to Safe Cycling (April 2018)

- Tips, techniques for cyclists, how to cycle through the newest roads and infrastructure (i.e. good education on roundabouts), road signs, and signals. Guide to e-bikes and laws (i.e. e-bike riders aged 16+ must wear a helmet). Also outlines penalties.
- To order free copies: Service Canada Publications> Cycling Skills

3.0 #Cycle ON Action Plan 2.0

- Cycling portfolio is held under two ministries: Ministry of Transportation and Ministry of Tourism, Culture and Sport
- Outlines change in penalties (i.e. dooring $60 - $500 to $300 - $1000 and increased demerit points from 2 to 3)
- Can't order hard copies, but can find them online.

4.0 Pilot project – Bloor Street

- Presented by Nancy Smith Lea, Director, Toronto Centre for Active Transportation and Shawn Dillon, Manager, Cycling Infrastructure and Programs, City of Toronto
- One of the most extensively studied bike lanes in North America
- Takeaway is the investment in stakeholder feedback

4.1 Key Findings of Economic Impact Study

Customer Counts

- The number of businesses that reported 100 customers or more per day increased in the study area on both streets. Reported spending increased on Bloor and Danforth at a similar rate.
- Both before and after the bike lane, customers who arrive by foot or on bike reported higher levels of spending on Bloor Street compared to those arriving by car or transit.
- On both streets, locals (those living or working in the area) were 2.6 times more likely than those coming from further away to spend more than $100 per month.

Customer Frequency and Vacancy Rates

- After accounting for other contributing factors such as age, gender and proximity, visitors reported coming to Bloor three days more per month after the bike lane was installed, while on Danforth visit frequency was unchanged.
- People who arrived on foot or on bike visited Bloor the most often, and people who drove or took transit visited nearly four days less per month.
- Vacancy rates held steady at 6% in Bloor Annex and Korea Town. On Danforth, they declined from 10% to 7%.

Shifts in Travel Patterns and Parking

- The percentage of customers cycling to Bloor nearly tripled (from 7% to 20%), a substantially higher increase than on Danforth Avenue, which has no bike lane.

- Walking remained the most popular travel choice, used by nearly half (48%) of visitors on Bloor, and driving is now the least (10%).
- Merchants on Bloor Street preferred to drive (49%) and there was no increase in cycling, which remained the least preferred travel choice (6%).
- The majority of merchants believed that at least 25% of their customers are driving to Bloor; however fewer than 10% of customers reported arriving by car.
- Parking difficulty increased on both streets for visitors who drove, growing by four times on Bloor (from 8% to 33%) and nearly doubling on Danforth (from 14% to 25%), though this street did not have any on-street parking removed.
- When looking at all visitors, the percentage who needed to find car parking and experienced difficulty remained small: 3% of all visitors on Bloor and 4% on Danforth.

Perceptions of Safety and Feedback on Bike Lane

- After the installation of the bike lane, the proportion of visitors who perceived Bloor Street as safe for cycling more than tripled (from 17% to 61%), and doubled among merchants (from 13% to 27%), while perceptions of safety on Danforth dropped (22% to 10%).
- The percentage of women who reported they now feel safe cycling on Bloor increased significantly more than men, from 12% to 58%.
- The majority of visitors (86%) and merchants (90%) provided feedback in response to an open-ended question soliciting thoughts or comments about the bike lane.
- While visitor comments were generally positive, the most common feedback related to the bike lane's configuration and safety. Merchants raised more concerns than visitors, especially over impacts to business, but safety, parking, and traffic were also important issues.

5.0 Bike Sharing Systems in North America

Title: The ups and downs of bike -sharing systems in north America: understanding the successes and struggles (Master's thesis)

- Presented by Marie-Ève Assunçao-Denis, Mcgill University, Montreal
- She looked at four case studies: BIXI (Montreal, Canada), Citi Bike (New York City, USA), DECOBIKE (San Diego, USA)), Pronto! and dockless systems (Seattle, USA)

BIXI (Montreal)

- Launched in May 2009 with 3,000 bikes at 200 stations (6250 and 540)
- Rapid expansion and continuous service every year (from April 15 till November15)
- Financial struggles, administrative and ownership issues (bankruptcy), problems with software and with customers
- Receives a lot of money from City of Montreal and has sponsors
- System very popular and with high level of use
- Led to changes in behavior and habits, improved the visibility of cycling in the city
- Montreal has good cycling culture, flat terrain, and good population density

- Strategies to attract users (BIXI Sundays, social networks, well defined target audiences) Improvement of cycling infrastructure and network, density of stations, multimodality

PRONTO! Seattle:

- Population (2014): 659,000
- Launched in October 2014 with 500 bikes at 50 stations (shut down in March 2017)
- Great cycling and sports culture, but hilly terrain (65% of trips going down) and rainy weather
- Number of users and revenues much lower than expected
- A third party in charge of the operation: increase in costs and debts
- Inefficient business strategy, fundraising and administration (few sponsors, company stopped raising funds)
- The City bought the system in a very bad financial situation
- No grant from the federal government to expand the system
- Attempts to increase use, designation of a new operator, contract for new electric bicycles
- Setback: shut down of the system to use funds for active transportation infrastructure and programs
- System very small, with no density or connectivity between stations, poor integration with other transportation networks
- Lack of cycling infrastructure
- Conflicts of interest, political tensions, loss of political support, poor media coverage, negative public perception
- Mandatory helmet law: lack of spontaneity, fewer cyclists in the streets, lower perception of security

<u>Recommendations for introducing a bike share system in a city:</u>

- Adopt an approach focused on public interest and not profitability
- Get City's political/administrative support and involvement
- Hire a bike-sharing company with expertise and a strong reputation
- Do not establish a completely privately funded program, unless it receives lucrative sponsorships allowing for low user fees and a good level of services
- Set clear and attainable program goals, and realistic ridership forecasts
- Maintain a certain degree of control or influence over aspects of the project
- Define the target audiences and adapt the system to their needs
- Offer many rates and payment options for users to attract new customers
- Do not adopt an hourly rental rate pricing structure so as to not compete with local bike rental shops
- Launch system with a sufficiently-large size of fleet, stations and area (around 20 to 28 stations por 2.6 square km)
- Create a cohesive and dense network of stations located near transportation hubs, popular destinations and residential zones
- Expand the system as the demand grows
- Locate stations in low-income areas where people would greatly benefit from additional transportation options

- Evaluate geographical and climatic conditions and consider options to counterbalance negative factors
- Use technologies to improve systems (intermodality, dockless/hybrid systems)
- For dockless and hybrid systems, regulate bike parking options
- Monitor trips and use data to improve the system's efficiency
- Ensure the operator's management practices, structural rules and operations are efficient
- Include citizens throughout the project and in decision-making processes
- Be transparent and share data
- Offer discounts for vulnerable populations (low-income communities, seniors) to increase accessibility
- Promote the system amongst different target audiences and customize the marketing approach
- Create partnerships with transportation related agencies and companies
- Invest in the city's cycling infrastructure
- Do not implement a mandatory-helmet law, and if one already exists, repeal it or do not enforce it

6.0 Advisory Lanes

The City of Ottawa is using Advisory Lanes - a new type of cycling facility on low volume, low speed streets. Advisory bicycle lanes are used on narrow, low-volume streets and are marked with dashed lines. These markings give cyclists riding space, but are also available to motorists if needed to pass oncoming traffic.

- First one rolled out in 2016

How they work:

- Advisory cycling lanes – a new way for drivers and cyclists to share the road.
- Motorists share a wide lane with oncoming vehicles.
- Each side of the road has an advisory cycling lane.
- Drivers move into the right-hand cycling lane when passing oncoming vehicles.
- Motorists must yield to cyclists already in that space.
- Motorists travel behind cyclists until it is safe to move back into their lane.

Advisory Cycling Lanes in Ottawa video:
https://youtu.be/0zdDIvKXMxY

KEYNOTE ADDRESS – Dale Bracewell, Manager, Transportation Planning at City of Vancouver

- Keynote address about achieving a major bike shift in Canada
- Measurement: health, safety, accessibility, affordability, economy, public life, environment, resilience
- Implementation principles: think big picture, be opportunistic, work together, invest wisely, innovate, learn and adapt
- Bold moves: Burrard-Cornwall improvements. A congested roadway that they closed and opened it to bikes (bold move 12,000-15,000 cars daily)
- Cycling must be included in all new developments
- Include measurements plans in their 2040 strategic long term plans

Leveraging Google Traffic Data

- Adam Drackley
- City roadways are being re-imagined as never before, with an emphasis on balancing the needs of all users. While pursuing these 'Complete Street' objectives and in support of an informed debate on tradeoffs, it is important to predict potential negative impacts on travel times through traffic modeling and direct travel time surveys. By using information exposed by Google Traffic, it is now possible to get a much better assessment of travel times before and after a roadway re-configuration. The City of Ottawa has been exploring the use of this new data asset, and is happy to share information regarding the system with interested parties.
- After Google makes the change to its billing system, you could likely issue Google 1000-1200 requests per day, each day for a month, for no charge. This should be sufficient to monitor traffic movement between four or five 'pairs' of locations along a roadway for 5 minute intervals, 24 hours a day.