

Agenda Including Addeds

Civic Works Committee

7th Meeting of the Civic Works Committee

April 2, 2019, 4:00 PM

Council Chambers

Members

Councillors P. Squire (Chair), M. van Holst, S. Lewis, S. Lehman, E. Pelozza, Mayor E. Holder

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

	Pages
1. Disclosures of Pecuniary Interest	
2. Consent	
2.1 4th Report of the Cycling Advisory Committee	2
2.2 Bostwick Road Realignment Environmental Study Report	12
a. <i>(ADDED) Revised Maps for Pg.'s 17, 18, 30 and 32</i>	42
2.3 Southdale Road West and Bostwick Road Improvements Environmental Study Report	46
2.4 RFP 19-03 Tree Inventory Update	62
2.5 Single Source Procurement Material Recovery Facility Old Corrugated Cardboard Screen Upgrade	65
2.6 2014 – 2018 Community Energy Action Plan – Final Update	72
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3. Scheduled Items	
4. Items for Direction	
5. Deferred Matters/Additional Business	
5.1 Deferred Matters List	96
5.2 <i>(ADDED) 3rd Report of the Transportation Advisory Committee</i>	99
5.3 <i>(ADDED) High-Occupancy Vehicle (HOV) in Next Transportation Master Plan (TMP) Update</i>	105
6. Adjournment	

Cycling Advisory Committee

Report

The 4th Meeting of the Cycling Advisory Committee
March 20, 2019
Committee Room #4

Attendance PRESENT: D. Mitchell, D. Doroshenko, D. Foster, R. Henderson, J. Jordan, W. Pol and R. Sirois; P. Shack (Secretary)

ABSENT: D. Szoller and M. Zunti

ALSO PRESENT: A. Giesen, Sgt. S. Harding, P. Kavcic, L. Maitland, A. Miller and S. Wilson

The meeting was called to order at 4:05 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 Cycling Interventions - What Counts and Who Decides?

That the attached presentation from R. Henderson, with respect to Cycling Interventions-What Counts and Who Decides, was received.

3. **Consent**

3.1 3rd Report of the Cycling Advisory Committee

That it BE NOTED that the 3rd Report of the Cycling Advisory Committee, from its meeting held on February 20, 2019, was received.

3.2 Municipal Council resolution adopted at its meeting held on March 5, 2019, with respect to the Downtown OEV East - West Bikeway Corridor Evaluation

That it BE NOTED that the Municipal Council resolution adopted at its meeting held on March 5, 2019, with respect to the Downtown OEV East-West Bikeway Corridor Evaluation, was received.

4. **Sub-Committees and Working Groups**

None.

5. **Items for Discussion**

5.1 London Police Services Pamphlet

The Cycling Advisory Committee held a general discussion, with respect to the attached pamphlet, entitled "Drivers, Pedestrians, Cyclists-We're in this Together", submitted by Sgt. S. Harding.

5.2 2018 and 2019 Work Plan

The Cycling Advisory Committee held a general discussion with respect to its 2018 and 2019 Work Plan

6. Deferred Matters/Additional Business

6.1 Advisory Committee Review-Interim Report-D. Foster

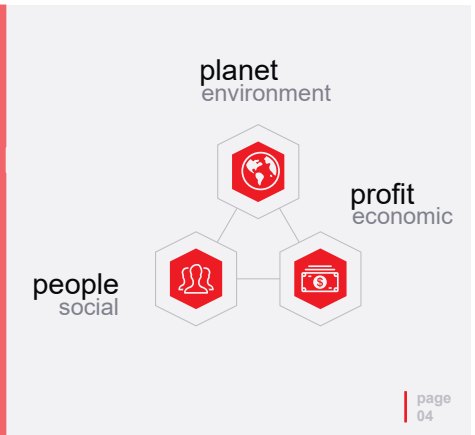
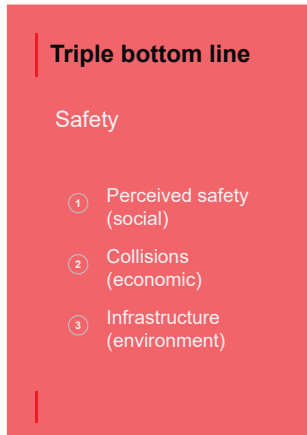
The Cycling Advisory Committee heard an oral presentation from D. Foster, with respect to the Advisory Committee Review-Interim Report that was presented at the Corporate Services Committee on March 19, 2019.

7. Adjournment

The meeting adjourned at 6:30 PM.

Cost benefit analysis of cycling interventions:

Who decides?
 What counts?
 How much?



Who decides? What counts?

“Choosing to ride a bicycle is aimed at improving health and gaining other social benefits **but not to reach a destination faster**”
(Transport for NSW, 2013)



Transport for NSW (2013). Principles and guidelines for economic appraisal of transport investment and initiatives. Sydney, Australia, p.157.

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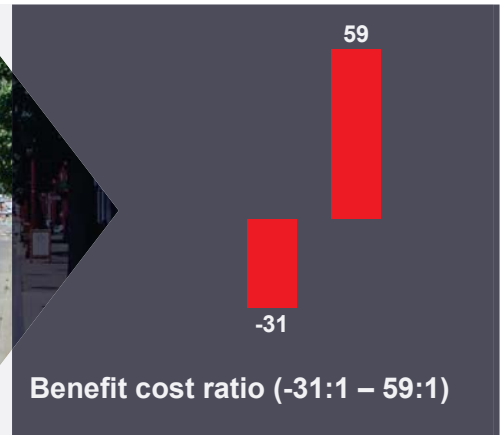
Scoping review economic valuation



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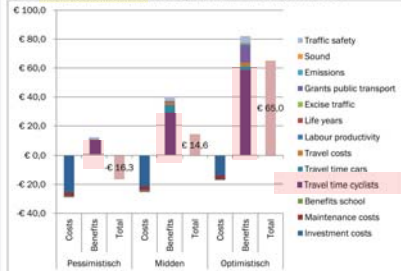
Themes:

- Health (e.g. multi-use trails on all-cause mortality, morbidity, mental health)
- Economy (e.g. revenue of replacing car parking with bike parking, retailer sales)
- Urban planning (e.g. cycle tracks, urban greenway)
- Environment (e.g. CO2, energy use)
- Transport (e.g. congestion, shift from car to bike share)



Time value

Figure S.3 Social costs and benefits Bike Bridge Utrecht (millions € net present value)



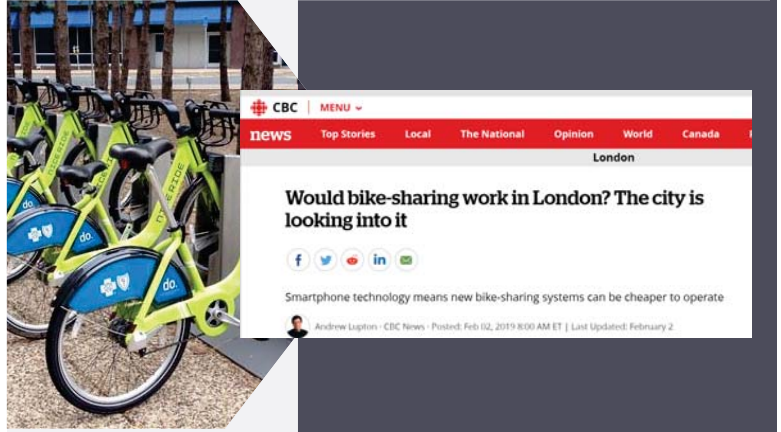
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profit	planet	people
Reduced traffic congestion	Emissions reductions	All-cause mortality
Road provision savings	Noise reduction	Comfort/security
Reduced automobile travel	Reduced sprawl costs	Health care cost savings
Vehicle operating costs savings	Reduced water pollution	Worker productivity gains
Reduced income from public transportation demand	Wildlife protections	Journey time reliability
Increased traffic safety	Heritage buildings	Household savings (e.g. auto expense)
Localized economic activity	Open space preservation	Equity
Higher property values	Reduced energy dependence	Journey ambience

Equity?



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Investment worthwhile?



World Health Organization's Health Economic Assessment Tool (HEAT)

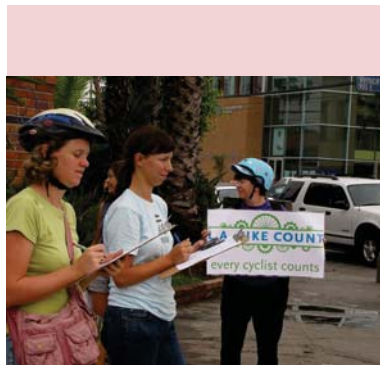
- What would be the value if we doubled cycling in my city?
- What would be the value if every adult in our town biked for 10 minutes more per day?
- What would be the value of building this new bike path?

Per Bicycle Kilometre Travelled Value

- ✓ A\$0.48 - \$A1.43 (2013)
Commonwealth of Australia, 2013;
PricewaterhouseCoopers, 2009; Yi et al., 2011
- ✓ 19,363 trips/daily; 2.7 km avg
London ON, IBI Group (2018)
- ✓ \$25,094 - \$74,760 daily (now)
\$50,188 - \$149,521 (doubled)
\$38 M and \$115 M yearly
(increase mode share to 5%)



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- ✓ Counts
 - Cordon, observation, population
- ✓ Exposure data
 - Injury and fatality collision data
- ✓ Questionnaires
 - Baseline, post intervention implementation, travel diaries
- ✓ National/local
 - Census, household



Rebecca Henderson, PhD Candidate
Faculty of Health Sciences, Western University
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How to deal with Aggressive Drivers and other Driving Situations:

As a pedestrian, cyclist or driver:

- Get a description of the vehicle, the driver and a licence plate number if possible.
- Do not chase the offending vehicle.
- Do not engage in any verbal confrontation.
- Do not physically confront the other driver!

Report Aggressive Drivers!

**Non-emergency driving complaints
Call London Police Service
519-661-5680**



**Drivers,
Pedestrians,
Cyclists**

We're in this together!



TIPS TO STAY SAFE
London Police Service

For Pedestrians:

- ♣ Cross the street at marked crosswalks and intersections.
- ♣ Stop and look every time before crossing streets even when you have the right-of-way.
- ♣ Before crossing, look left, right, then left again and over your shoulder for turning vehicles.
- ♣ Begin crossing the street on “Walk” signals – never on a solid or flashing “Don’t Walk”.
- ♣ Make eye contact with drivers so they see you. Never assume they do.
- ♣ Use sidewalks. If none, walk facing traffic so you see vehicles and drivers see you.
- ♣ Stay visible after dark and in bad weather by wearing light coloured clothing, reflective material or carrying a flashlight.
- ♣ Don’t let parcels, umbrellas or hats interfere with a clear view of traffic.

For Cyclists:

- 🚲 Wear a helmet and use hand signals – it’s the law.
- 🚲 Ride on the right side of the road with traffic – never against it.
- 🚲 Obey all the rules of the road, signs and traffic signal lights.
- 🚲 Be aware of the traffic around you – scan side to side, to the front and even behind you.
- 🚲 Stay visible, with lights, reflectors and a bell – it’s the law.
- 🚲 Make eye contact with motorists and pedestrians before crossing paths.
- 🚲 Obey all the rules of the road, signs and traffic signals.
- 🚲 Avoid riding on sidewalks (unless under 14 years of age).

For Drivers:

- 🚗 Leave early so you’re not running late.
- 🚗 Obey speed limits, signs and traffic lights – never run Red or Amber lights.
- 🚗 Stop or yield to pedestrians at crosswalks and intersections – it’s the law.
- 🚗 Don’t block crosswalks when stopping at stop signs or intersections.
- 🚗 Always look out for pedestrians especially before turning at a green light or making a “right turn on a red”.
- 🚗 Be courteous when merging and changing lanes or when others are doing the same.

Driving, walking or riding

Rules of the road

For Pedestrians:

- Cross the street at marked crosswalks and intersections.
- Stop and look before crossing a street, even when you have the right-of-way.
- Before crossing, look left, right, then left again and over your shoulder for turning vehicles.
- Only begin crossing the street on a “walk” signal; never on a solid or flashing “don’t walk.”
- Make eye contact with drivers so you know they have seen you; never assume.
- Use the sidewalk. If there isn’t a sidewalk, walk facing traffic so you see vehicles and drivers can see you.
- Stay visible after dark and in bad weather by wearing light-coloured clothing, reflective material or carrying a flashlight.
- Don’t let parcels, umbrellas or hats interfere with a clear view of traffic.

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- Be courteous when merging and changing lanes.

How to deal with aggressive drivers and other driving situations:

- Get a description of the vehicle, the driver and a licence plate number if possible.
- Do not chase the offending vehicle.
- Do not engage in any verbal or physical confrontation.
- Report aggressive drivers to police by calling the non-emergency number at 519-661-5680.

For more information on traffic and road safety, visit the Crime Prevention section of the London Police Service website at www.londonpolice.ca

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	BOSTWICK ROAD REALIGNMENT ENVIRONMENTAL STUDY REPORT

RECOMMENDATION

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

- (a) The Bostwick Road Realignment Environmental Study Report **BE ACCEPTED**;
- (b) A Notice of Study Completion for the project **BE FILED** with the Municipal Clerk; and,
- (c) The Environmental Study Report **BE PLACED** on the public record for a 30 day review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Environment and Transportation Committee - August, 2005 - Bradley Avenue Extension, White Oak Road to Bostwick Road Environmental Study Report
- Planning and Environmental Committee – October 15, 2012 - The Southwest Area Secondary Plan Report
- Strategic Priorities and Policy Committee – June 23, 2014 – Approval of 2014 Development Charges By-Law and DC Background Study
- Civic Works Committee — March 8, 2016 — Bostwick Road Environmental Assessment Appointment of Consulting Engineer
- Civic Works Committee – January 10, 2017 – Southdale Road Environmental Assessment Appointment of Consulting Engineer

2015-2019 STRATEGIC PLAN

The following report supports the Strategic Plan through the strategic focus area of *Building a Sustainable City* by implementing and enhancing safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists through the improvement of roadways.

DISCUSSION

Purpose

This report provides Committee and Council with an overview of the Municipal Class Environmental Assessment (EA) for the Bostwick Road Realignment from 400 m north of Pack Road / Bradley Avenue Extension to Wharncliffe Road West and seeks approval to finalize the study. The EA also includes a section of the Bradley Avenue extension from Pack Road to Wonderland Road South. The completed Environmental Study Report (ESR) documents the EA and decision-making process for the Bostwick Road Realignment Class EA.

Background

Bostwick Road is identified as a north/south arterial road in the current Official Plan. The need to complete the EA study was identified in the South West Area Plan (SWAP) to identify the proposed realignment and associated long-term property requirements for the coordination of developments within the City's southwest area. As part of SWAP, medium density residential designation was allocated along Bostwick Road and at three quadrants of the intersection of Bostwick Road and Bradley Avenue extension.

Southwest Area Plan (SWAP 2014)

Municipal Council adopted the Southwest Area Secondary Plan (SWAP) which guides urban growth in the Southwest London study area. SWAP identified the Bostwick Residential Neighbourhood, which is intended to "provide for residential development with the highest intensity of all of the Residential Neighbourhood Areas in the Southwest Planning Area, to support activities in the Wonderland Boulevard Neighbourhood". The SWAP indicated a mix of low, medium, and high density residential uses distributed throughout the neighbourhood, and a multi-use path along the Thornicroft Drain allowing pedestrian and cyclist movement generally north-south. The Thornicroft Drain corridor forms a linear area of Open Space land use which is crossed by collector roads in order to create connectivity with the Wonderland Corridor to the east.

The design of Bostwick Road will mainly accommodate traffic flowing south of Southdale Road, intersecting future Bradley Avenue extension and the proposed Kilbourne Road to the south, and collecting traffic volumes from adjacent developments in a safe and efficient manner.

Bradley Avenue Extension Environmental Assessment

The EA for the Bradley Avenue Extension from White Oak Road to Bostwick Road, was completed in 2005 to address the deficiency in roadway capacity south of the Thames River in the east-west direction. The EA recommended two different alignments be considered through the Bostwick Road intersection, however no preferred alignment was selected when the subject EA was completed.

Project Description

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

The limits for the EA Study generally includes the section of Bostwick Road from just north of Pack Road / Bradley Avenue extension to Wharncliffe Road in the south, a section covering the proposed extension of Bradley Avenue from Wonderland Road South to just west of Bostwick Road, and Kilbourne Road extension connecting to Bostwick Road through the south property line of the existing Forest City Community Church (FCCC). The study limits extend approximately two km from north to south and are within a predominantly agricultural area. The study area is within the urban growth boundary covered by the City of London's SWAP. The limits of the concurrent Southdale Road West EA include the Bostwick Road intersection and extend south down Bostwick Road to abut the study area for this study. The study area for the project is shown on Figure 1 below.

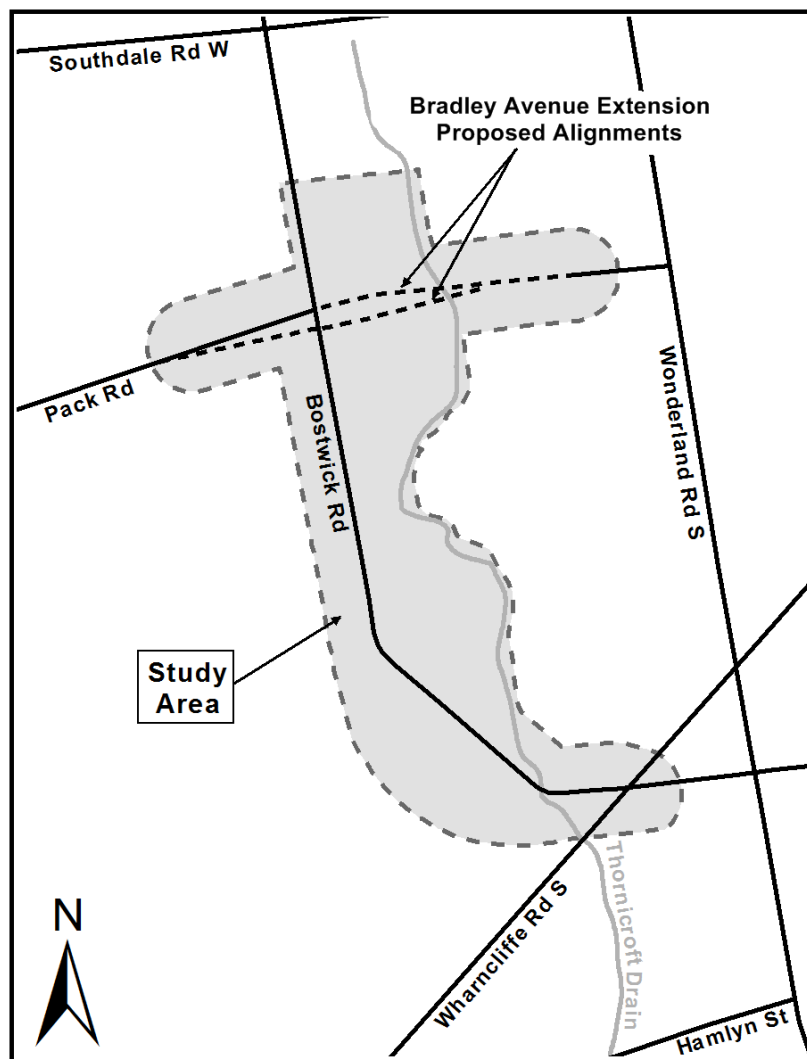


Figure 1: EA Study Area

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 Bostwick Road realignment, Bradley Avenue extension, and Kilbourne Road extension. 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. The proposed new alignment of Bostwick Road will allow for improved operations and maintenance as well as better meet the mobility, future growth, and accessibility needs of all transportation users. A copy of the Executive

Summary for the ESR is contained in Appendix A.

Planning and Analysis of Alternatives

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

Phase 2 of the MCEA process involved identifying alternative solutions (planning alternatives) to address the problem/opportunity statement.

The following six alternative solutions were developed for improvements to Bostwick Road:

1. Do Nothing
2. Limit Development
3. Improve Alternative Routes
4. Roadway Intersection/Operational Improvements
5. Provide Additional Lanes
6. Accommodate Other Modes

Alternative solutions for Bradley Avenue were taken from the Bradley Avenue Extension EA completed in 2005. In addition to these alternatives another option was also evaluated. They include:

1. Do Nothing
2. Bradley Avenue EA Option X – extend to the north
3. Bradley Avenue EA Option Y – extend to the south
4. Bradley Avenue Option Z – extend further to the south than Option Y

Through the evaluation of these alternatives against a set of criteria that broadly represents the environment (technical, cultural, socio-economic, natural, costs), a combination of Alternatives 4, 5, and 6 were recommended for Bostwick Road and Alternatives 2, 3 and 4 for Bradley Avenue were recommended to be carried forward to Phase 3 of the EA study.

Design Alternatives

Phase 3 of the MCEA process involved the development and evaluation of alternative design concepts. The main outcome in this phase of the study was developing road cross-sections and layout concepts for the recommended planning solution. Identification of the land requirements for this project was a key outcome to identify appropriate mitigation measures such as minimizing cultural, socio-economic and environmental impacts. Four design concepts that comprise alignment and intersection treatments (A, B, C, & D) were proposed for Bostwick Road and three design concepts (X, Y, & Z) were proposed for Bradley Avenue.

Recommended Alternatives

Bostwick Road

The existing Bostwick Road alignment does not meet current geometric design standards and does not address drainage deficiencies. In addition, it is not consistent with the objectives of the London Plan and the Southwest Area Plan (SWAP). Based on the evaluation of the alternatives, it was determined that the proposed alignment of Option C best met the technical requirements, needs and planning policies for the area

while also limiting environmental impacts. Option C provides the maximum available setback from residential properties while also limiting encroachment into adjacent natural areas. North of the future Kilbourne Road intersection, the alignment remains the same as existing, until Pack Road, where the alignment is shifted to the west to minimize encroachment into woodland natural heritage features. At the southern portion (south of the proposed Kilbourne Road extension) the road jogs slightly to the south of the existing alignment through planned residential development area and connects with the existing Wharncliffe Road intersection. Roundabouts are recommended along Bostwick Road at Bradley Avenue extension and the future Kilbourne Road extension intersections. The preferred design for the Bostwick Road realignment is shown on Figure 2.

Bradley Avenue

Based on the evaluation of the alternatives, it was determined that the proposed alignment of Option Y best met the technical requirements while also limiting impacts to other areas. This option requires shifting the current Pack Road alignment to the south to connect with Bostwick Road and Bradley Avenue. The preferred design for Bradley Avenue alignment is shown on Figure 3.

Potential interim and ultimate cross-section configurations of the proposed Bostwick Road and Bradley Avenue alignments are shown on Figures 4 & 5. It should be noted that the EA study recommends the construction of the ultimate four-lane configuration as one project since the majority of the estimated cost for both roads occurs during the interim phase. However, property availability may also influence implementation.

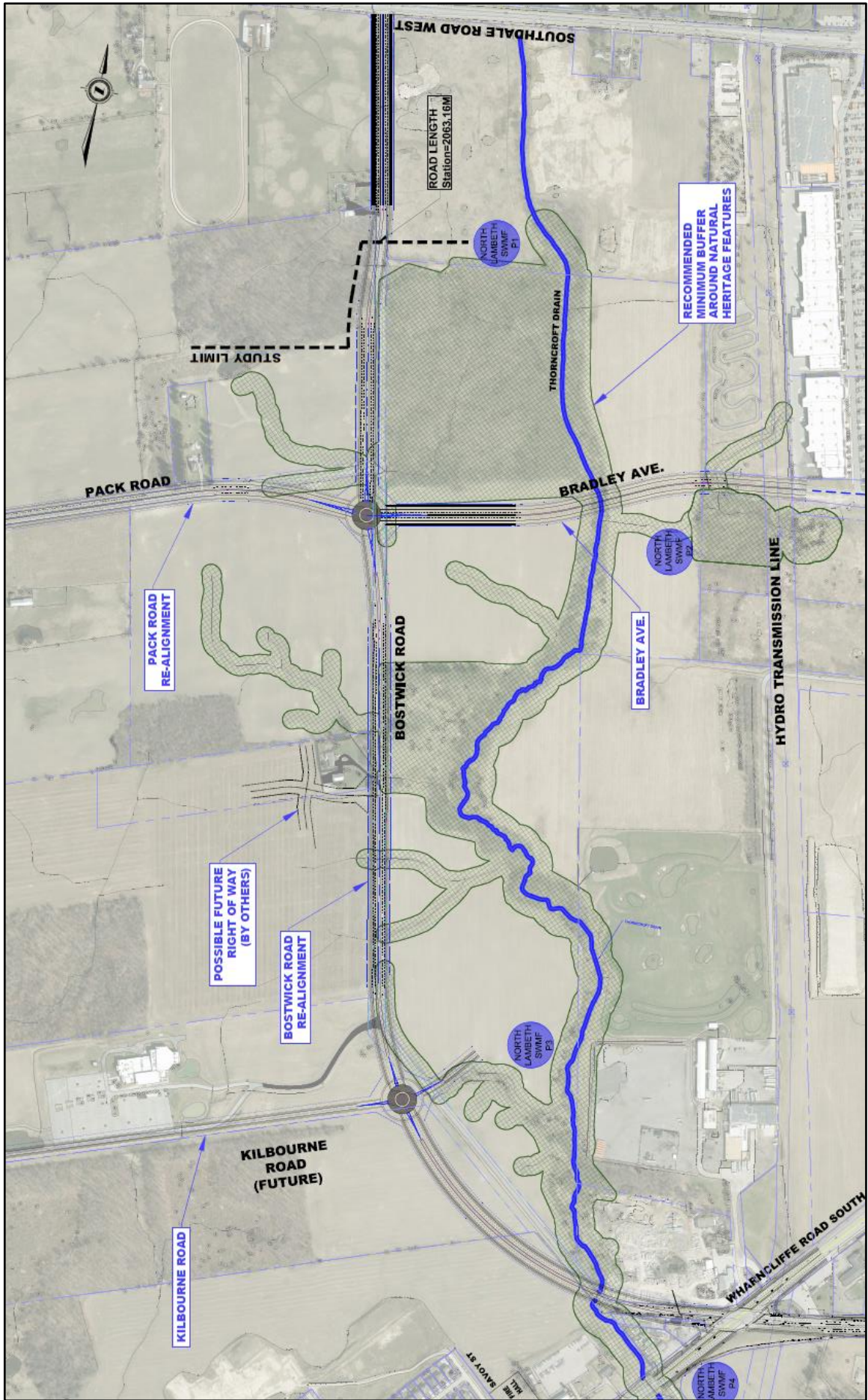


Figure 2: Bostwick Road Realignment Preferred Option

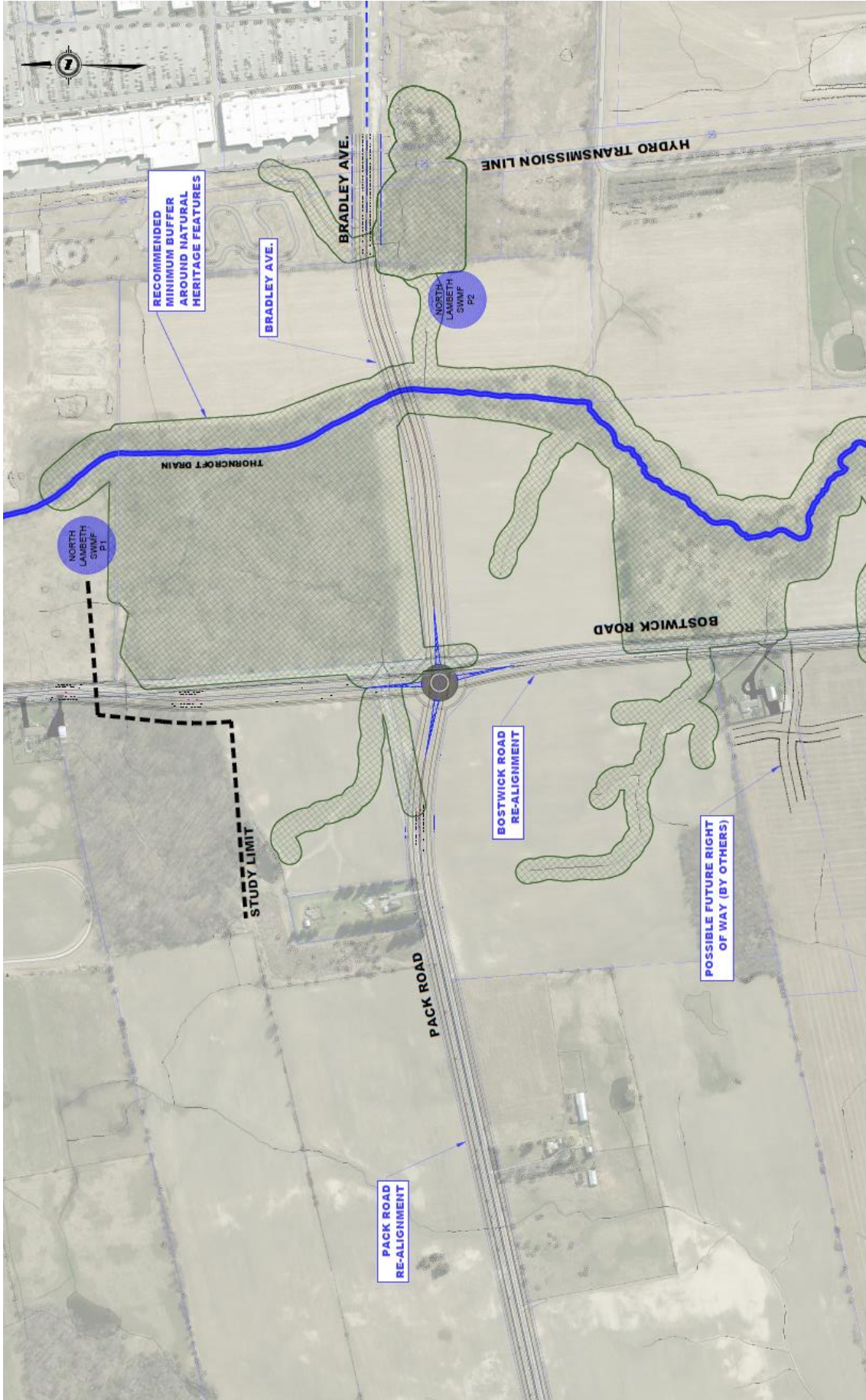


Figure 3: Bradley Avenue Preferred Option

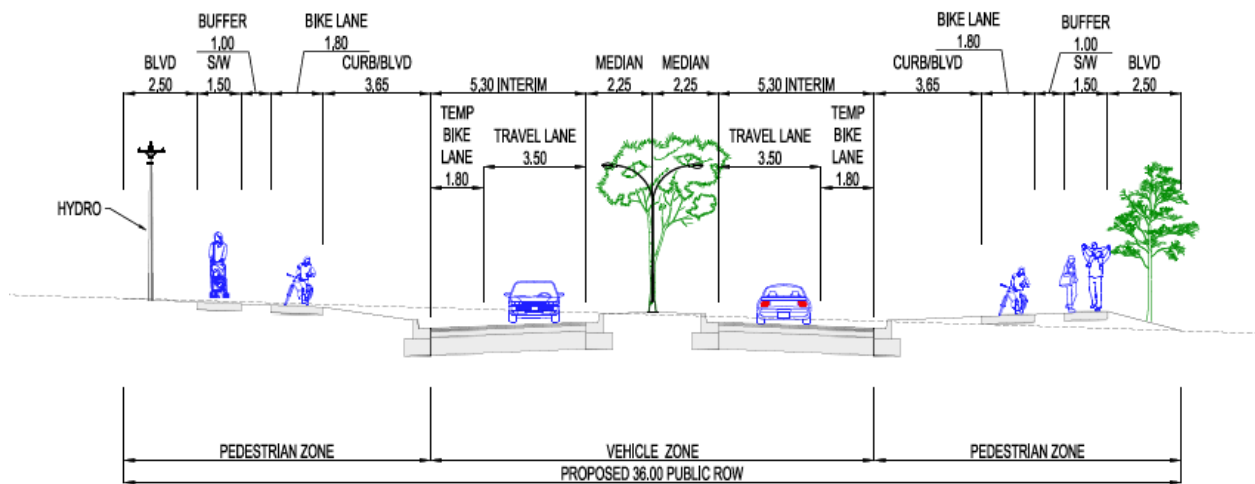


Figure 4: Preferred Bostwick Road & Bradley Avenue Cross Section - Interim Configuration

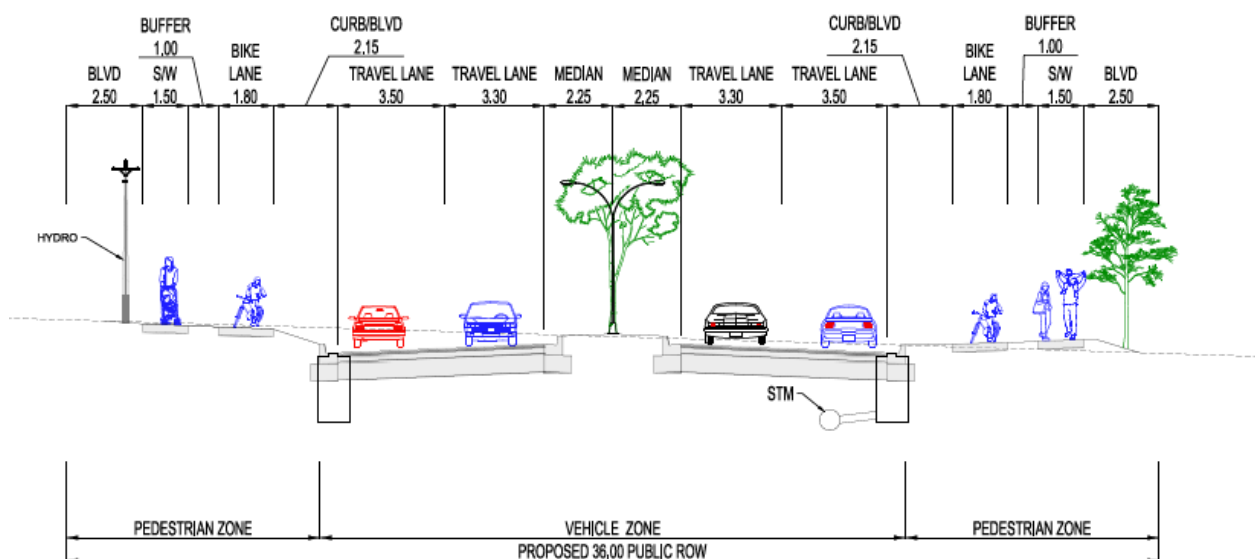


Figure 5: Preferred Bostwick Road & Bradley Avenue Cross Section - Ultimate Configuration

Property Impacts

In order to construct Bostwick Road, Bradley Avenue and Kilbourne Road in accordance with the preferred plans for realignment and road widening, the City will acquire property (either through negotiations with property owners or dedication through development). Where possible, efforts were made during the study to minimize the amount of property required.

CONSULTATION

Public and Agency Consultation

Consultation was a key component of this Class EA study in order to provide an opportunity for stakeholder groups and the public to gain an understanding of the study process and provide feedback. The consultation plan was organized around key study

milestones, including the two Public Information Centres (PICs), stakeholder engagement and participation of technical review/regulatory agencies. The key stakeholders included residents, interested public, agencies, First Nations communities and those who may be affected by the project. Property owners brought forward suggestions that were developed into alternatives and reviewed under the process. The key consultation milestones include:

Notice of Commencement	May 17 and 24, 2016
Public Information Centre No. 1	October 13, 2016
Public Information Centre No. 2	June 14, 2017
Notice of Completion	Upon Council acceptance of the ESR

Agencies and stakeholders were notified at study milestones and during specific phases of the study which required an information update pertaining to them. In addition to formal public events, the project team conducted in-person meeting with stakeholders and agencies.

Prior to writing this report, a property owner raised a concern with respect to the Environmental Impact Study (EIS) report, specifically in regards to the natural environment buffers required as part of the preferred road alignment. The study team met with the land owner representatives and agreed to add clarifications to a few sections in the EIS and ESR reports in order to address their concerns. The study team clarified that while these buffers may be utilized by the developers of the lands described in the EIS, they may also be reviewed and potentially refined during subsequent EISs undertaken as a part of future developments.

The study team explained that in order to evaluate potential impacts of the alignment alternatives, it was necessary to complete a field assessment and review/document the condition of significant vegetation patches identified in the SWAP. The EIS study area needed to be large enough to encompass a full spectrum of potential alignment alternatives and verify the preferred alternative of the EA would not jeopardize significant features within the adjacent significant vegetation patch. The recommended buffer widths identified in the EIS are consistent with the City's Official Plan policies and council approved guidelines (e.g., Environmental Management Guidelines) and have provided the framework needed to complete the assessment of road alignment alternatives.

Consultation with First Nations

Consultation with First Nations is a mandatory component of the Municipal Class EA process and is required as a result of the Crown's Duty to Consult. At the beginning of the study, a comprehensive list developed by the project team included the Ministry of Aboriginal Affairs, Aboriginal Affairs and Northern Development Canada, Association of Iroquois & Allied Indians, Union of Ontario Indians and the London District Chiefs Council. Notification was also provided to: Bkejwanong Walpole Island First Nation, Six Nations of the Grand River Territory, Aamjiwaang First Nation, Delaware Nation – Morovian of the Thames, Chippewas of the Thames First Nation, Caldwell First Nation, Munsee-Delaware Nation, Oneida Nation of the Thames, Mississaugas of New Credit First Nation, and the Kettle and Stony Point First Nation.

IMPLEMENTATION

Construction Staging

The improvements planned in this ESR are long term in nature. The implementation timing will be managed to facilitate the surrounding development coordinated through the annual Growth Management Implementation Strategy (GMIS) process. The approach to implementation can be adaptable because the Bostwick Road project trigger is primarily development more than road capacity. The phasing options are described below and will be reviewed in the future as the implementation approaches. Factors will include traffic operations and costing.

Potential Interim Configuration

In a two-stage implementation scenario, Bostwick Road could initially be constructed as a two-lane road. The initial phase would be a two-lane roadway with an urban cross section and ultimately widened to four lanes. In the interim, Bostwick Road would have 2 x 3.5 m through lanes, a 1.8 m temporary bike lane (5.3m between curbs) and a 4.5 m centre raised median to provide access control.

Ultimate Configuration

The ultimate configuration could be achieved as a second phase following a two-lane improvement or immediately as a single phase project. In its ultimate configuration, the typical four-lane cross section developed for Bostwick Road includes 2 x 3.3 m through lanes, 2 x 3.5 m curb through lanes, a 4.5 m centre raised median, 2.15 m buffered off-road bicycle lanes, and 1.5 m sidewalks separated from the roadway curb via 2.15 m vegetated boulevards along both sides.

The concept is similar for Bradley Avenue. However, the scope of the Bradley Avenue corridor considered in this EA is localized and the project staging will be dictated by the broader corridor project. The details of the roundabout staging will be determined in the design phase.

The preliminary costing of the two approaches is illustrated in the following table.

Cost Comparison Analysis for Bostwick Road & Bradley Avenue

Road	Two-Stage Construction			Single Phase Construction
	Phase 1	Phase 2	Total	
Bostwick Road	\$16,977,000	\$2,213,000	\$19,190,000	\$18,128,400
Bradley Avenue	\$7,063,000	\$1,267,500	\$8,330,500	\$7,899,750

Based on the financial analysis illustrated above, the preliminary recommendation is to construct Bostwick Road and Bradley Avenue to the ultimate four-lane configuration as one single phase project since the majority of the estimated cost for both roads occurs during the interim phase if these roads are constructed in two phases.

The property acquisition will be coordinated through the development of associated land parcels. It is recommended that the full property requirements be acquired during the interim construction stages. Acquiring the full property requirements will provide the City with the flexibility in constructing for the interim conditions.

Cost Estimates

Preliminary Detailed Costing of One-Stage Approach

The cost estimates to construct Bostwick Road and Bradley Avenue in their ultimate configurations under one project each are \$18,128,400 and \$7,899,750 respectively. The breakdown of the cost estimate with anticipated implementation timing based on the draft 2019 Transportation Development Charges Background Study (DCBS) currently in development is shown below. These cost estimates will inform the DCBS process. Coordinated lifecycle renewal of sewers and watermains that are funded separately are identified individually. Figures are in 2018 dollars.

Cost Estimate for Bostwick Road Four Lane Construction as One Project Potential Implementation Timing 2026

Item	Estimated Cost (\$)
Road Widening Cost Estimates	
Roadworks and Earthworks	3,700,000
Storm Sewers	3,300,000
Traffic Signals and Illumination	850,000
Miscellaneous	650,000
Utility Relocation (10%)	988,000
Sub-total	9,488,000
Engineering and Consulting (15%)	1,423,200
Contingency (15%)	1,423,200
Property Acquisition*	4,000,000
Total Preliminary Cost Estimate	16,334,400
Lifecycle Renewal Cost Estimate	
Sanitary Sewers	690,000
Watermain	690,000
Sub-total	1,380,000
Engineering and Consulting (15%)	207,000
Contingency (20%)	207,000
Total Preliminary Cost Estimate	1,794,000

**Cost Estimate for Bradley Avenue
Four Lane Construction as One Project
Potential Implementation Timing 2028**

Item	Estimated Cost (\$)
Road Widening Cost Estimates	
Roadworks and Earthworks	2,350,000
Storm Sewers	800,000
Traffic Signals and Illumination	500,000
Miscellaneous	375,000
Utility Relocation (10%)	482,500
Sub-total	4,507,500
Engineering and Consulting (15%)	676,125
Contingency (20%)	676,125
Property Acquisition*	1,000,000
Total Preliminary Cost Estimate	6,859,750
Lifecycle Renewal Cost Estimate	
Sanitary Sewers	400,000
Watermain	400,000
Sub-total	800,000
Engineering and Consulting (15%)	120,000
Contingency (20%)	120,000
Total Preliminary Cost Estimate	1,040,000

CONCLUSION

Improvements to the Bostwick Road alignment are necessary to fulfill its necessary function in the transportation network as the area develops and the number of road users grow. The realignment of Bostwick Road was identified in SWAP. An outstanding localized alignment issue for the Bradley Avenue Extension also required finalization. The new Bradley Avenue will provide more east-west capacity in the southwest and reduce pressure on Southdale Road. A Municipal Class Environmental Assessment (EA) was undertaken to confirm the detailed alignments to enable potential future land designation changes to proceed in coordination with the required road realignment. The ESR is ready for final public review.

Four Bostwick Road and three Bradley Avenue alternative design concepts were developed and evaluated based on factors such as, but not limited to: surrounding planned land use, impact on areas of archaeological potential, built heritage resources, vegetation, property and municipal services and utilities as well as opportunities for streetscaping and active transportation. Based on these factors, Option C was selected as the preferred design for Bostwick Road and Option Y was selected as the preferred design for Bradley Avenue.

The implementation timing of these improvements will be managed to facilitate the surrounding development coordinated through the annual Growth Management Implementation Strategy (GMIS) process. The approach to the Bostwick Road realignment can be adaptable because the project trigger is primarily development and is tentatively identified for 2026 implementation. The portion of the Bradley Avenue extension considered in this study is part of a larger project and is planned for 2028 implementation.

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

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

Acknowledgements

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

SUBMITTED BY:	RECOMMENDED BY:
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Attachment: Appendix A – Environmental Study Report Executive Summary

cc. Henry Huotari, P.Eng, Parsons

Executive Summary

Study Background

The City of London retained Parsons Inc. to complete a Schedule 'C' Municipal Class Environmental Assessment (Class EA) for Bostwick Road from just north of Pack Road / Bradley Avenue extension to Wharncliffe Road South. The purpose of this study is to determine the existing and future transportation needs for the Bostwick Road corridor, specifically addressing the alignment of Bostwick Road and to finalize the alignment of the future Bradley Avenue Extension. Study justification was identified in The London Plan, the City's Transportation Master Plan (Smart Moves), and the Southwest Area Plan (SWAP). The study addresses the safety, capacity, and operational improvements on Bostwick Road.

As per Phase 1 of the Municipal Class EA process, a problem/opportunity statement is needed. This statement outlines the need and justification for the overall project and establishes the general parameters, or scope, of the study. Based on a review of the existing and future conditions of the study area, which includes a review of existing planning policies, traffic conditions, the transportation network, the natural environment, cultural resources, and servicing needs, the following problem/opportunity statement was developed for this project:

As a result of the planned residential and commercial growth forecasted in the City of London's Smart Moves - the London 2030 Transportation Master Plan, South West Area Plan (2014) and Official Plan, lands adjacent to Bostwick Road are projected to experience a significant amount of residential, commercial and institutional development in the near future. To maintain the City's acceptable level of transportation service and to accommodate future developable lands in the southwest area of the City of London, it is critical to assess the Bostwick Road corridor for future traffic demands, accessibility through the corridor, and to improve the roadway geometrics. In developing a functional, safe and visually attractive corridor that is suitable for all road users, the following have been identified as needing to be evaluated:

- Roadway and intersection capacity and geometric modifications;
- Extension of Bradley Avenue to connect with Bostwick Road/Pack Road;
- Potential realignment of the south end of Bostwick Road;
- Accommodation for pedestrians and cyclists by way of improving active transportation facilities; and,
- Roadway drainage and stormwater management.

Municipal Class Environmental Assessment Process

The Municipal Class EA (Municipal Engineers Association October 2000, as amended in 2007, 2011 and 2015) is the guiding process that the subject municipality, the City of London, is required to complete for public works projects as indicated under the *Ontario Environmental Assessment Act* (EAA). The Municipal Class EA applies to municipal infrastructure projects including roads, water and wastewater. Projects are classified according to the scope of work and the anticipated work for this project would be classified as:

Schedule C: Defined as a project that includes major expansions or new facilities that have the potential to have significant impact on the environment and are therefore subject to the full Municipal Class Environmental Assessment process; preparation of an Environmental Study Report is required for this type of study.

Schedule 'C' projects require that all 5 phases of the Municipal Class EA planning process are completed. The first four phases will be completed as a part of this study; the fifth phase will be initiated following completion of the study. The 5 phases are summarized as follows:

- Phase 1 – Identify the Problem and Opportunity Statement
- Phase 2 – Identify and Evaluate Alternative Solutions
- Phase 3 – Identify Alternative Design Concepts for Preferred Solution
- Phase 4 – Prepare Design Plans & Environmental Study Report
- Phase 5 – Implement Recommended Solution

Existing Conditions

Several technical studies were undertaken to determine the baseline conditions of the study area. The key findings are included below:

Local Planning Policies

The City's Mobility Transportation Master Plan (TMP), SmartMoves, identifies the need for mobility improvements for all modes of transportation to address the projected growth in the City of London. Specific to the study area, the TMP identifies the extension of Bradley Avenue from Wonderland Road South to Bostwick Road, providing four through-lanes, on a 10 to 15-year timeframe, as a desired improvement. The realignment of Bostwick Road is identified in the Official Plan; however, it is not specifically included in the TMP.

The City of London’s current Official Plan dates to 1991, however “The London Plan” is the latest update to the Official Plan, of which sections of the new Official Plan are currently still under review. The City’s Official Plan dictates the types of roads throughout the City, thereby indicating the purpose/key use of the roadway. Both Bostwick Road and Pack Road / Bradley Avenue are identified as Civic Boulevards / Arterials.

The Southwest Area Secondary Plan (SWAP) is an area-specific Secondary Plan that guides urban growth in the Southwest London study area. Municipal Council has adopted the SWAP and the Official Plan Amendment to realign the existing Bostwick Road. In addition to the realignment of Bostwick Road, the SWAP also identifies the Bostwick Residential Neighbourhood, which is intended to “provide for residential development with the highest intensity of all of the Residential Neighbourhood Areas in the Southwest Planning Area, to support activities in the Wonderland Boulevard Neighbourhood”. The SWAP indicates a mix of low, medium, and high density residential uses distributed throughout the neighbourhood, and a multi-use path allowing pedestrian and cyclist movement generally north-south (Figure 1). The Thornicroft Drain corridor forms a linear area of Open Space land use which is crossed by collector roads in order to create connectivity with the Wonderland Corridor to the east.

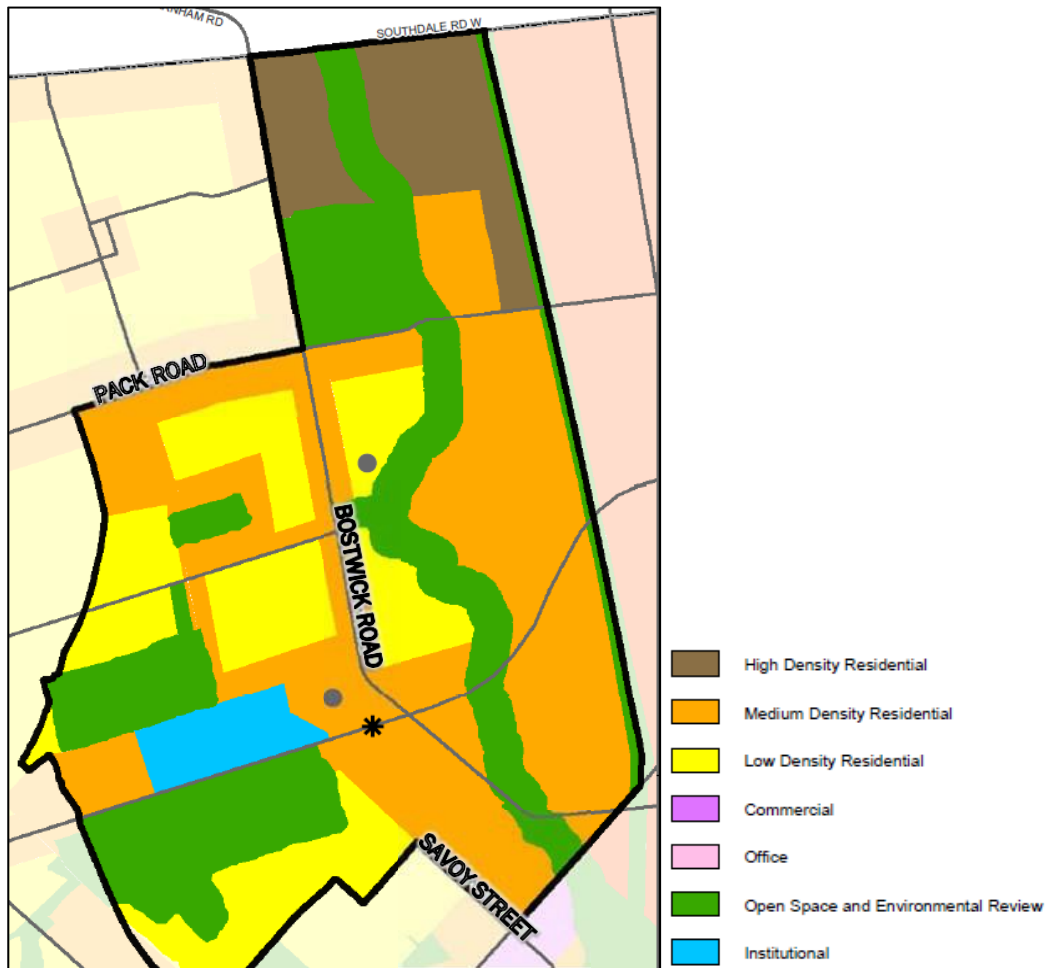


Figure 1: SWAP, Bostwick Residential Neighbourhood Land Use

Active Transportation

The 2016 Cycling Master Plan identifies a preferred cycling network throughout the city that includes a proposed separated-facility route along the entirety of Bostwick Road as well as a “desired connection” which links Kilbourne Road to the west side of the Thornicroft Drain.

The SWAP indicates a planned multi-use path/trail that, within the vicinity of the study area, begins to the east of the Wharcliffe Road South intersection and follows Thornicroft Drain north beyond the project limits. This planned trail is shown to cross both Bostwick Road near the future Kilbourne Road intersection and the proposed eastern terminus of the Bradley Avenue extension.

Environmental Assessment Studies

The Bradley Avenue Extension Environmental Assessment was completed in 2005 from White Oak Road to Bostwick Road to address the deficiency in east-west roadway capacity south of the Thames River. The EA recommended two different alignments be considered through the Bostwick Road intersection, which are to be confirmed as part of this study.

Traffic

A traffic analysis was undertaken for the corridor in light of the proposed developments and land uses for the adjacent area, as well as future roads. Corridor lane capacity analysis for the future (2035) ‘Do Nothing’ traffic conditions was undertaken. Based on the results of the analysis, Bostwick Road from Pack Road to Wharncliffe Road is projected to operate above capacity under this scenario. This section of Bostwick Road will require additional through lanes both in the northbound and southbound directions to accommodate the future forecasted (2035) traffic volumes.

Intersection capacity analyses under a ‘Do Nothing’ traffic scenario was also completed for the signalized and unsignalized intersections using the future (2035) traffic volumes established. Critical movements and significant delays were forecasted for the unsignalized intersections of Bostwick Road with Pack Road and Kilbourne Road, however traffic signal control is not warranted for these intersections. In consultation with the City, roundabout options for both intersections were considered based on their ability to alleviate delay issues and provide other benefits (evaluated further in this study). The signalized intersection of Bostwick Road and Wharncliffe Road is projected to contain several critical movements (i.e. movements that will operate over capacity). This intersection would benefit from the additional northeast through lane as well as an additional westbound through lane and westbound double left turn lane, though these should be confirmed in detail design.

A traffic analysis was also completed for the future (2035) traffic volumes with additional through lanes, which indicated there will be no capacity issues along the Bostwick Road corridor.

Natural Environment

The major significant environmental features includes the Thornicroft Drain, the major aquatic feature flowing north-south east of Bostwick Road, and several significant woodlots as shown in Figure 2. Given the current rural nature of the study area, several Species at Risk were encountered, or determined to reside or exist, within the study area.



Figure 2: Key Environmental Features in the Study Area

Alternative Solutions

Based on Phase 2 of the Municipal Class EA process, alternative solutions, which are ways to address the study objectives and opportunities (i.e. problem/opportunity statement), should be identified and described, including the “Do Nothing” alternative, which is typically included to represent the status quo. Six alternative solutions were developed for improvements to Bostwick Road:

Alternative Solution		Description
1.	Do Nothing	Maintain existing roadway network and provide no major changes to Bostwick Road (this alternative was selected as a baseline for comparison of alternative solutions).
2	Limit Development	Restrict development in the surrounding area to projects already underway in order to limit growth.
3	Improve Alternative Routes	Expand or maximize capacity on adjacent roads where justified (e.g. Southdale Road, Wonderland Road, Wharncliffe Road).
4	Roadway Intersection / Operational Improvements	Undertake roadway intersection / operational improvements and geometrics for future roadway connections (traffic signals, turn lanes, etc.)
5	Provide Additional Lanes	Widen Bostwick Road through additional lanes to increase traffic capacity and accommodate future growth in the southwest.
6	Accommodate other Modes	Improve existing facilities to encourage active transportation (walking, cycling, etc.) and improve Bostwick Road to accommodate future transit services.

Through the evaluation of these alternatives against a set of criteria that broadly represents the environment (technical, cultural, socio-economic, natural, costs), a combination of Alternatives 4, 5, and 6 were recommended for Bostwick Road. Alternative solutions for Bradley Avenue were taken from the Bradley Avenue Extension EA completed in 2005. In discussion with developers, a third option based off of Option Y was developed. Thus, Option Y is renamed Option Y1, and the reworked option is called Option Y2. They include:

Alternative Solutions		Description
1	Do Nothing	Do not extend Bradley Avenue from Wonderland Road to Bostwick Road.
2	Bradley Avenue EA, Option X	Extend Bradley Avenue through a wooded area located northeast of the proposed Bradley Avenue and Bostwick Road intersection (Bradley Ave EA Option X). This option would connect with Pack Road and Bostwick Road at its current location.
3	Bradley Avenue EA, Option Y1	Extend Bradley Avenue south of the wooded area, thereby avoiding it, but requiring property south of the current alignment, which is now identified as a medium density residential area as identified in SWAP (Bradley Ave EA Option Y). This option would require shifting the current alignment of Pack Road to the south to connect with Bostwick Road.
4	Option Y2	Extends Bradley Avenue further south of the wooded lot than Option Y1 and avoids encroaching on the adjacent woodlot while also creating a parcel of developable land. This would shift the current intersection with Pack Road further south and require greater realignment of Pack Road.

Through evaluation of these alternatives against a set of criteria that broadly represents the environment (technical, cultural, socio-economic, natural, costs), Options X, Y1, and Y2 were recommended to be carried forward to Phase 3 of the EA study.

Alternative Design Concepts

Subsequently, as per requirements of Phase 3 of the Municipal Class EA, alternative design concepts were developed based on the alternative solutions for the alignment and improvements to Bostwick Road, the alignment of Bradley Avenue Extension, the alignment of Kilbourne Road, and intersection controls.

The following design concepts were proposed for Bostwick Road:

- Option A: generally maintains the current Bostwick Road alignment from the north end of the corridor to the future Kilbourne Road and Bostwick Road connection. South of the future Kilbourne Road, Bostwick Road shifts significantly to the southwest through a planned residential development area. Option A maintains the intersection of Bostwick Road and Wharncliffe Road.
- Option B: realigns the corridor to the west to avoid encroaching onto natural heritage features. Maintains existing road alignment at the north and south ends of the corridor.
- Option C: realigns the corridor to the west at Pack Road to avoid encroaching onto natural heritage features. South of the future Kilbourne Road connection, the alignment jogs slightly to the south through planned residential development areas and connects to the existing intersection at Wharncliffe Road.

- Option D: realigns the corridor to the west at Pack Road to avoid encroaching onto natural heritage features. South of the future Kilbourne Road connection, the alignment jogs to the south through planned residential development areas and connects with Savoy Street. A new signalized intersection will be required at Wharncliffe Road/Savoy Street. The west leg of Wharncliffe Road would be closed as a cul-de-sac where Bostwick Road currently connects.

Based on the evaluation of the alternatives, it was determined that the ultimate proposed alignment of Option C (Figure 3) best met the technical requirements, needs and planning policies for the area while also limiting environmental impacts. Option C provides the maximum available setback from residential properties while also limiting encroachment into adjacent natural areas. North of the future Kilbourne Road intersection, the alignment remains the same, until Pack Road, where the alignment is realigned to the west to minimize encroachment into natural heritage features. At the southern portion (south of the proposed Kilbourne Road) the road jogs slightly to the south of the existing alignment through planned residential development area and connects with the existing Wharncliffe Road intersection.

Active transportation improvements for Bostwick Road would be provided via continuous sidewalks and off-road bike lanes. Roadway drainage will be accommodated and modified accordingly depending on either the rural or urban cross section to be used and how development progresses. Some commercial property is required at the Bostwick / Wharncliffe intersection.

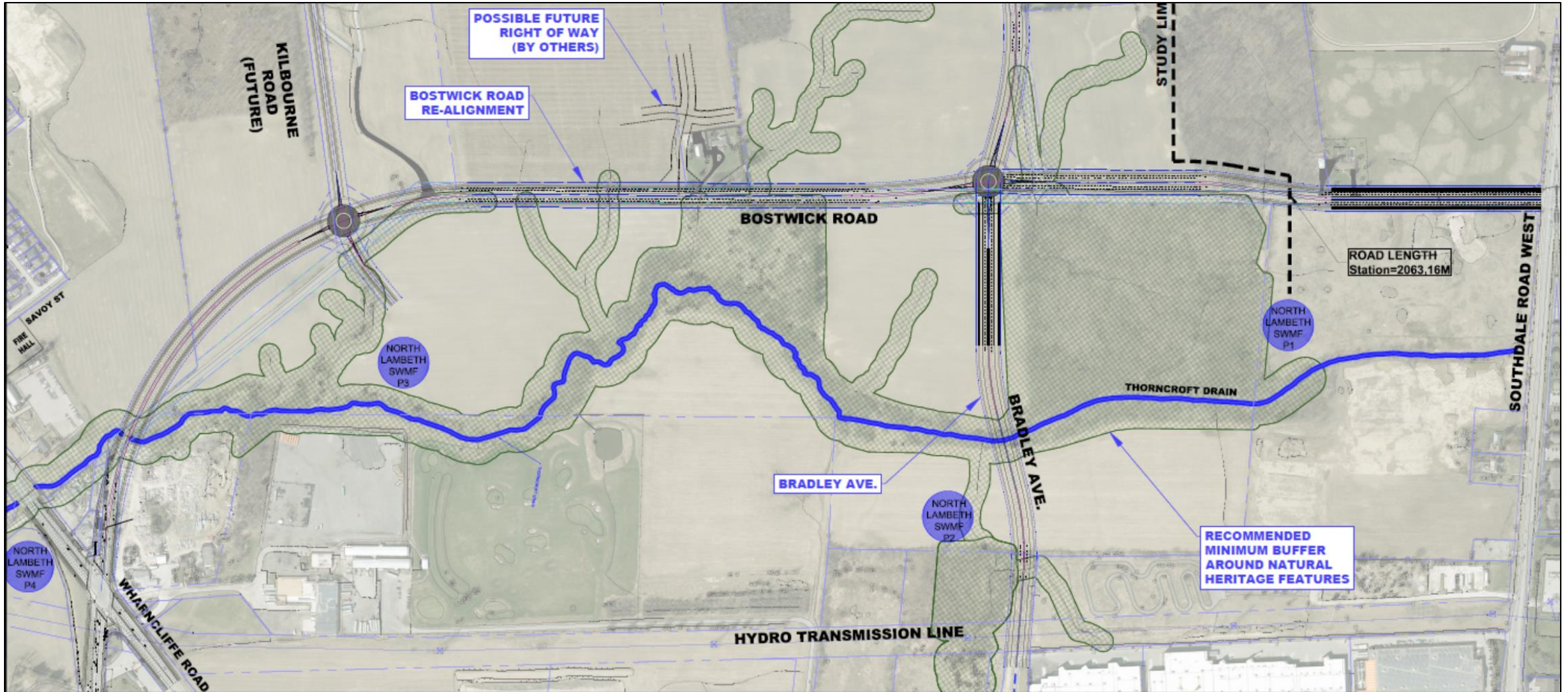


Figure 3: Ultimate Preferred Design Concept Option C for Bostwick Road

The Bradley Avenue extension options that were carried forward include Option X, Y1, and Y2, which were developed previously in the Bradley Avenue Extension EA and in discussion with developers.

- Option X: extends Bradley Avenue through a wooded area northeast of the proposed intersection and would connect with Pack Road at Bostwick Road at its existing location.
- Option Y1: extends Bradley Avenue through a planned residential area south of the wooded lot and avoids encroaching on the adjacent woodlot. This would shift the current intersection with Pack Road to the south.
- Option Y2: extends Bradley Avenue further south of the wooded lot than Option Y1 and avoids encroaching on the adjacent woodlot while also creating a parcel of developable land. This would shift the current intersection with Pack Road further south and require greater realignment of Pack Road.

Based on the evaluation of the alternatives, it was determined that the ultimate proposed alignment of Option Y1 (Figure 4) best met the technical requirements while also limiting impacts to other areas. Option Y1 extends to the south of Patch 10064, avoiding a significant woodlot containing rare species, and allows for possible street connections, both of which are consistent with local planning policies. This option requires shifting the current Pack Road alignment slightly to the south to connect with Bostwick Road and Bradley Avenue, though significantly less than Option Y2. Bradley Avenue will operate with two through lanes to accommodate vehicular traffic in the interim, with an ultimate four lane configuration in the future.

Active transportation improvements will be provided via continuous sidewalks and paved shoulders for interim conditions only. Roadway drainage will be accommodated and modified accordingly depending on either the rural or urban cross section to be used and how development progresses. It is recommended that the City investigate rezoning of the lands to the south of the Bradley Avenue extension to mitigate the loss of adjacent medium density developable area that will result from implementing the preferred Option.

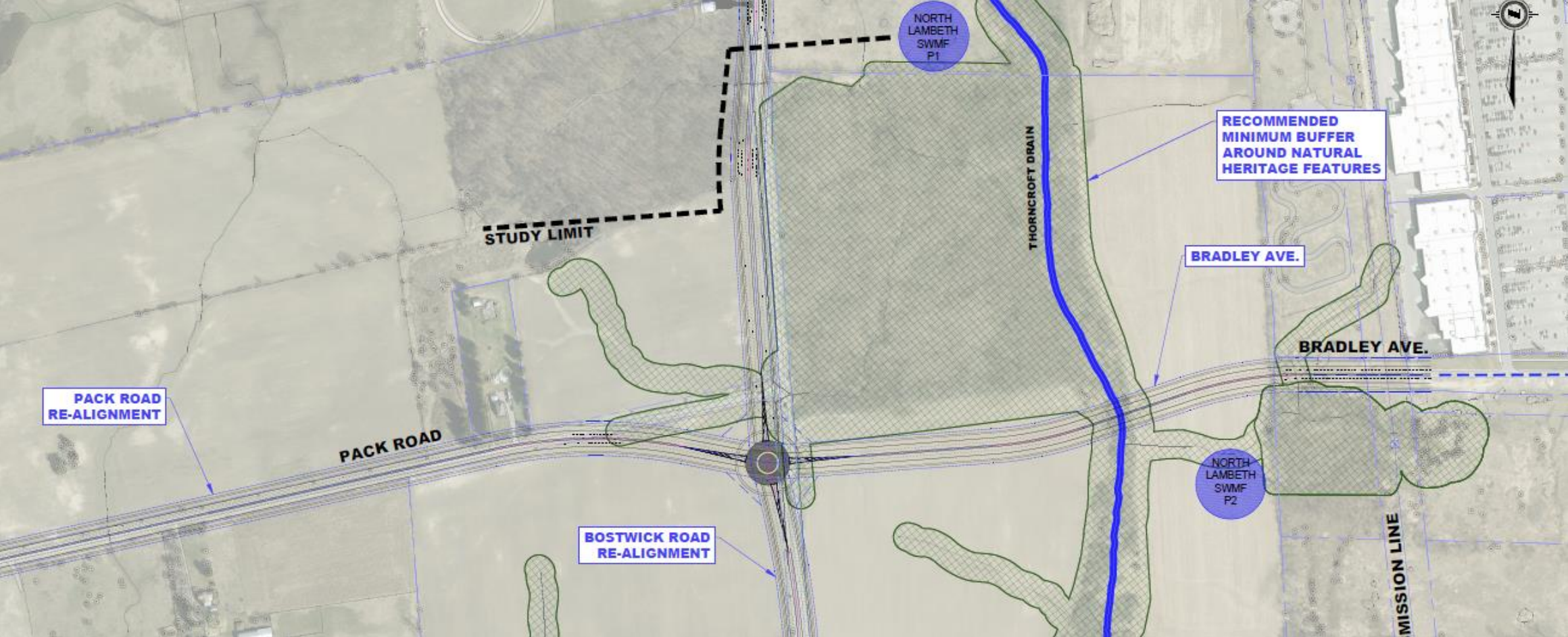


Figure 4: Ultimate Preferred Design Concept Option Y1 for Bradley Avenue Extension

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Two alternative design concepts were developed for the new intersection that will be created on Bostwick Road with the extension of Kilbourne Road from the west:

- Option 1: the Kilbourne Road extension connecting to Bostwick Road to the north of the existing Forest City Community Church (FCCC) south property line to avoid impacts to the adjacent wooded area to the south.
- Option 2: the Kilbourne Road extension connecting to Bostwick Road to the south of the existing Forest City Community Church (FCCC) south property line to avoid impacts to the FCCC property.

Based on the evaluation of the alternative alignments for a future Kilbourne Road connection with Bostwick Road, it was determined that the proposed alignment of Option 1 best met the technical requirements while also limiting impacts to the adjacent woodlot to the south. Implementing this option will require approximately 21.5m of property frontage from the FCCC property (actual property requirements to be confirmed during the detailed design phase of the study) and coordination with the FCCC to identify alternative access requirements.

The study also evaluated whether roundabouts or traffic signals were preferable for this area. Based on the evaluation of the intersection control options (roundabout or traffic signals) for the intersections of Bostwick Road with Pack Road/Bradley Avenue and Kilbourne Road, roundabouts were identified as the preferred configurations for both locations. Roundabouts were determined to outperform signal control in the following key categories: user safety, traffic operations, emissions, and maintenance costs. Of particular importance for the Bostwick corridor, roundabouts would provide more flexibility in the design of key intersection approaches. This flexibility of being able to modify the approach alignments provides an added advantage in being able to reduce impacts to adjacent environmentally significant areas.

Consultation

As public input is a vital part of the Class EA process, the study included a number of contact points with the public, Indigenous communities, technical agencies, and stakeholder interest groups. The key consultation milestones include:

Consultation Event	Date
Notice of Commencement	May 17 and 24, 2016
Public Information Centre No. 1	October 13, 2016
Public Information Centre No. 2	June 14, 2017
Notice of Completion	Anticipated April 2019

Public outreach and advertisements of these milestone events included local newspapers, direct mailing and email. Individual meetings with agencies, stakeholders, and property owners were held throughout the study. Indigenous communities were also contacted at key milestones.

Recommended Design

Cross Sections and Construction Staging

The cross sections for the Bostwick Road and Bradley Avenue corridors were developed to meet both technical requirements of the study and planning objectives established in the Southwest Area Plan (SWAP 2014), The London Plan (Official Plan), 2030 Transportation Master Plan – SmartMoves and City of London Cycling Master Plan (London ON Bikes). The cross sections in particular were designed according to the City’s Complete Streets Manual, which seeks to create a safe environment for all road users and also to improve the comfort of travel and access throughout the right-of-way.

Bostwick Road

Bostwick Road could be implemented in either one stage or two stages (interim and ultimate). If construction is planned for two (2) stages, Bostwick will be constructed initially as a two-lane (interim) urban cross section and ultimately widened to four lanes. In the interim (2026), Bostwick Road is to be reconstructed to 2 x 3.5m through lanes, 2 x 1.8m temporary on-road bike lanes, and a 4.5m centre raised median to provide access control (Figure 5). 1.5m sidewalks along both sides set back from the roadway curb will also be provided. Interim construction phasing will allow for the installation of sidewalks, street lighting, municipal services, and utilities in the ultimate location as well as appropriate maintenance of traffic during construction and flexibility in timing and construction of the proposed roundabouts. The centre median would serve as a safety buffer between opposing lanes, however temporary breaks in the median will be provided to allow emergency vehicles the ability to turn around under the interim condition. The interim right-of-way of Bostwick Road will span 36.0m to protect for the ultimate configuration.

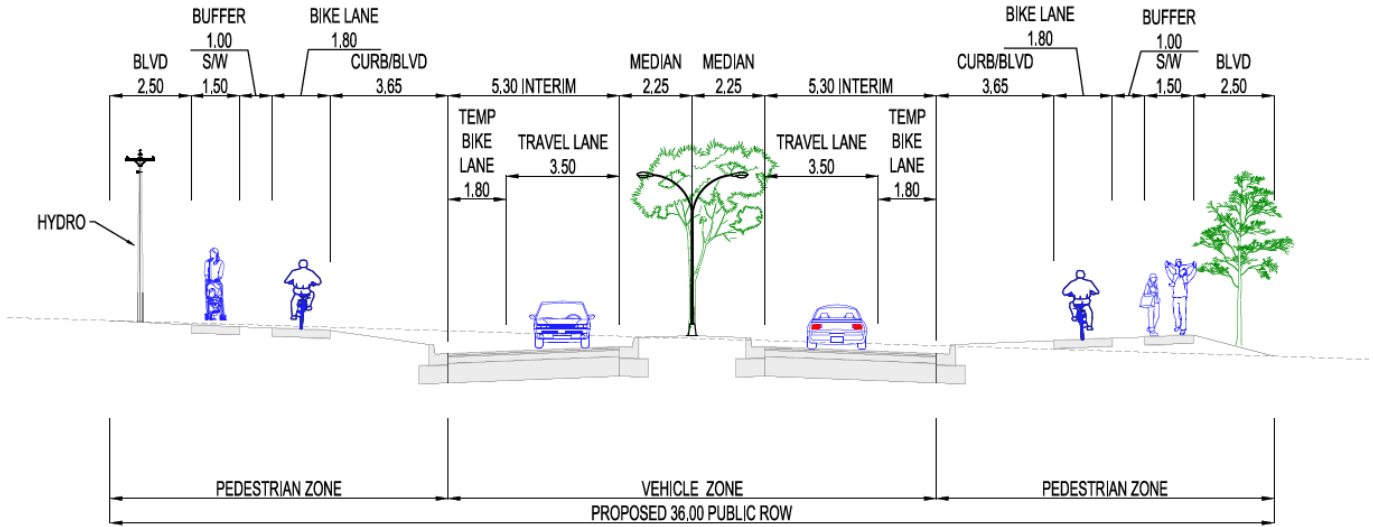


Figure 5: Bostwick Road, Interim Configuration (Stage 1)

In its ultimate configuration the typical cross section developed for Bostwick Road includes 2 x 3.3m through lanes, 2 x 3.5m curb lanes, a 4.5m centre raised median, 1.8m buffered off-road bike lanes, and 1.5m sidewalks separated from the roadway curb via a 1.7m vegetated boulevards on both sides (Figure 6). If Bostwick Road is to be implemented in one stage, this ultimate configuration would be constructed.

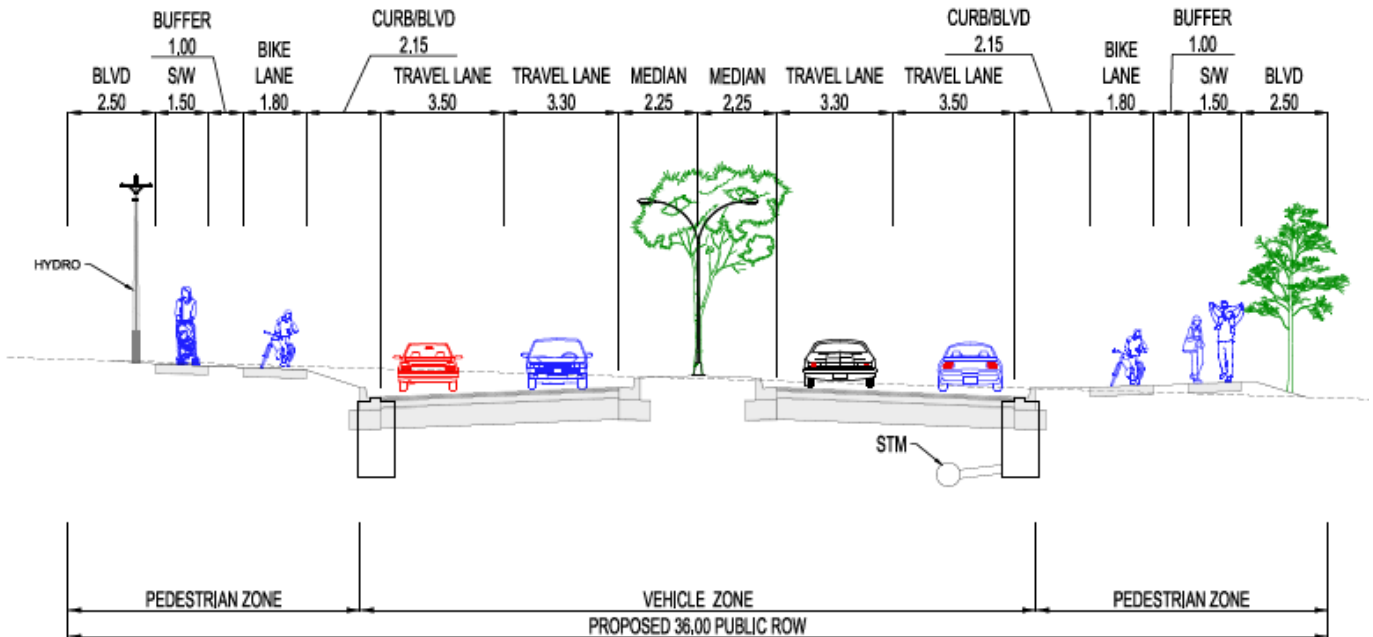


Figure 6: Bostwick Road, Ultimate Configuration (Stage 2)

Bradley Avenue

While the Bradley Avenue EA recommended its own cross section options, the preferred design concepts were revised according to the City’s Complete Streets Manual. Major differences include lane widths, and the location of bike lanes. Bradley Avenue could be implemented in either one stage or two stages (interim and ultimate). If construction is planned for two (2) stages, Bradley Avenue will be constructed as a two-lane roadway (interim) and ultimately to four lanes. In the interim (Stage 1), the Bradley Avenue extension is to be constructed with an urban cross section to accommodate stormwater drainage and includes 2 x 3.5m through lanes, 2 x 1.8m temporary on-road bike lane, and a centre raised median to provide access control and 1.5m sidewalks and 1.8m buffered off-road bike lanes on both sides (Figure 7).

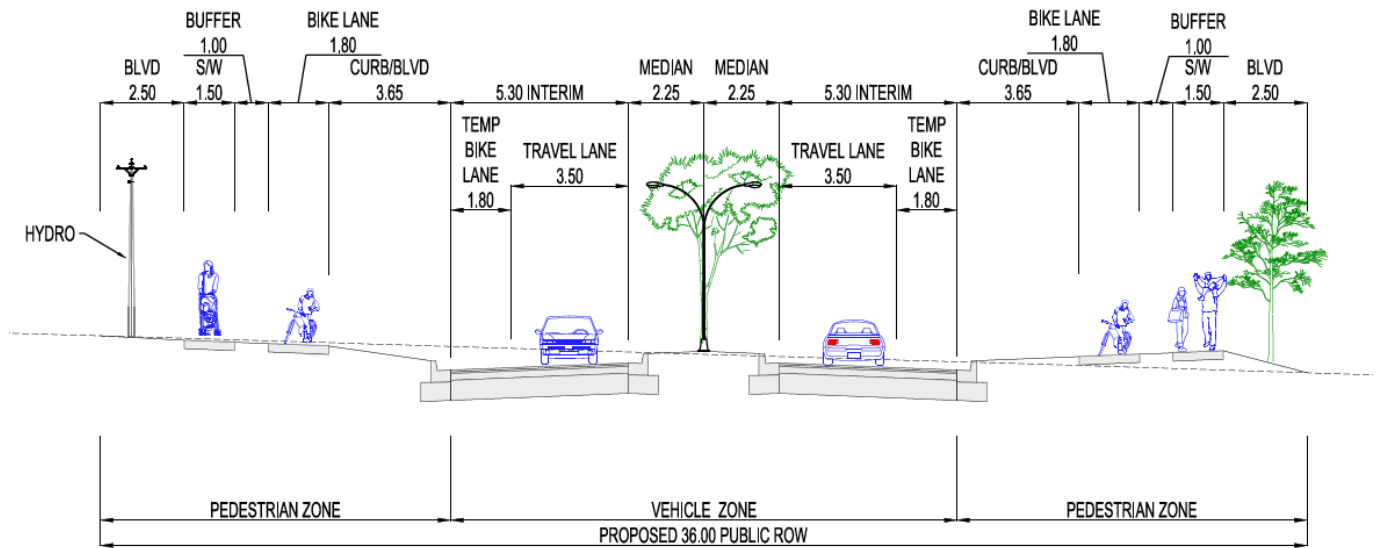


Figure 7: Bradley Avenue, Interim Configuration (Stage 1)

In Stage 2, Bradley Avenue is to be reconstructed to 2 x 3.3m through lanes, 2 x 3.5m curb lanes, and a 4.5m raised median with storm sewers and curb and gutter to accommodate stormwater drainage (Figure 8). Pedestrians would be accommodated via 1.5m sidewalks. Cyclists would be accommodated via 1.8m buffered off-road bike lanes. If Bradley Avenue is to be implemented in one stage, this ultimate configuration would be constructed.

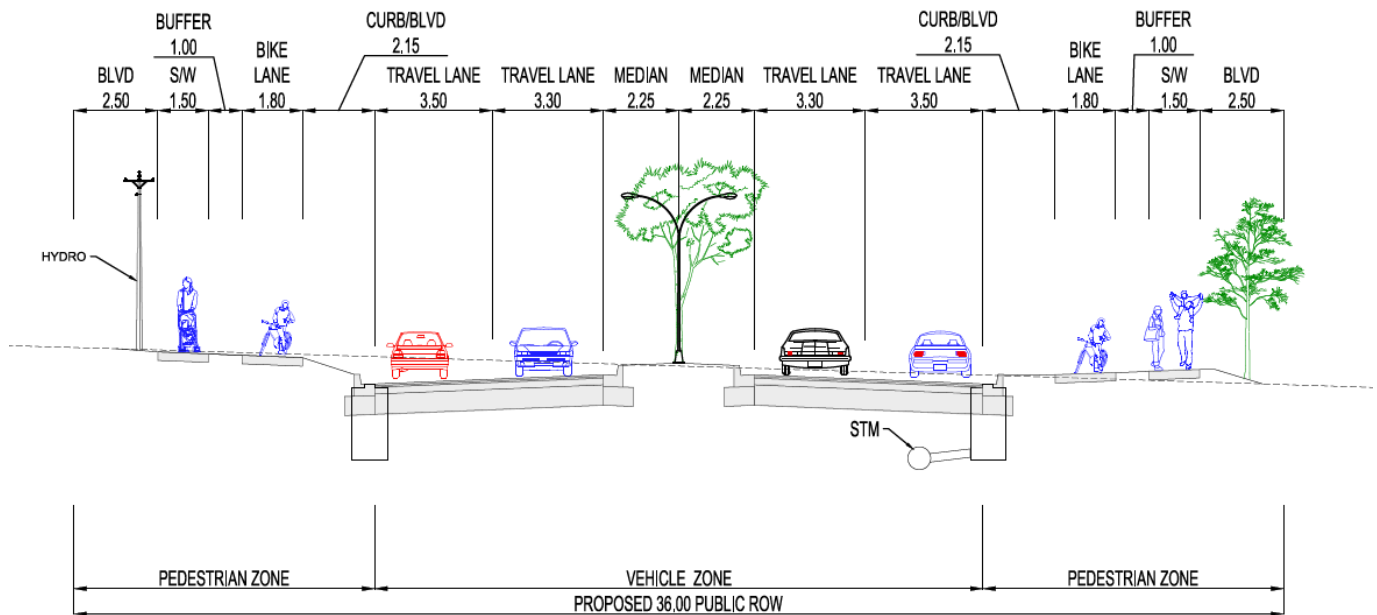


Figure 8: Bradley Avenue, Ultimate Configuration (Stage 2)

Kilbourne Road

The future Kilbourne Road is planned as a primary collector (Neighbourhood Connector as per The London Plan) and will be implemented in conjunction with adjacent area land development. Kilbourne Road is to be constructed with 2 x 3.0m through lane and 1.5m sidewalks on both sides, set back from the roadway via vegetated boulevards of varying widths.

Intersection Controls

Within the study area, the Bostwick Road corridor includes two existing intersections (Pack Road / Future Bradley Avenue extension and Wharnccliffe Road South / Exeter Road) and three future intersections as identified in the Southwest Area Secondary Plan (SWAP) study. The future intersections include two secondary collectors (neighbourhood connectors) located approximately 500m south and north of the current Pack Road intersection, and the future Kilbourne Road extension further south. The following summarizes the proposed controls at each intersection:

Intersection	Intersection Control Options
Pack Road / Future Bradley Avenue extension	Roundabout
Neighbourhood Connector (north of Pack Rd)	Stop controlled right/in and right-out movement only
Neighbourhood Connector (south of Pack Rd)	Stop controlled right/in and right-out movement only
Kilbourne Road extension	Roundabout
Wharnccliffe Road South / Exeter Road	Existing signal controlled, intersection modifications including additional lanes

Drainage and Storm Water Management

Previous reports have recommended proposed stormwater management facility (SWMF) locations and sizes for the future drainage areas within the project. Ultimately, Bostwick Road drainage will be directed to one of these communal SWMFs; four SWMF ponds are applicable to this study: North Lambeth SWMF P1, North Lambert SWMF P2, North Lambeth SWMF P3, and North Lambeth SWMF P4.

New outlets will be required to convey drainage to the future SWMFs adjacent to Thornicroft Drain. While the preliminary SWMF sizing for Ponds P1, P2, P3 and P4 have been completed, the exact location of the outlet connections cannot be determined until the SWMFs are located. In general, roadway drainage will be conveyed to SWMFs P1, P3 and P4 via a sufficiently sized swale or pipe. At this stage, the design of the connecting structure between the roadway and SWMF has not been considered as the future development plan is not fully developed or approved. This will need to be determined in subsequent design phases for this project.

To alleviate roadway runoff that will result as an increase in impervious areas, LID measures were considered and evaluated to ensure the best approach to water quality and quantity management. The pervious pipe system was ultimately recommended and consists of a rectangular trench filled with clean stone and a filter sand layer at the bottom, thereby providing some water quality measure. During detailed design, a hydraulic model is required to ensure the distance between the sewer system and the perforated pipe is sufficient and that the extra rainfall can be conveyed by the sewer system. Therefore, the LID system attenuates roadway runoff volume significantly while providing water quality and quantity measures.

Property Impacts

The City must acquire property (either through negotiations with property owners or dedication through development) in order to construct Bostwick Road, Bradley Avenue and Kilbourne Road in accordance with the preferred plans for realignment and road widening. Where possible, efforts were made during the study to minimize the amount of property required. This will be further refined during Detailed Design, once the total amount of property required has been confirmed. At this point, it is estimated that approximately 11.8 Ha will be required to reconstruct the noted roadways to their ultimate cross sections.

Of note, the proposed realignment of the Bostwick Road corridor will also result in surplus lands previously owned by the City that can be sold to adjacent property owners. It may be an option to relocate the North Lambeth SWMF P3 to these surplus lands to avoid additional property needs.

A summary of the preliminary ultimate property requirements and offsetting surplus property resulting from the proposed recommendations are illustrated in Figure 9.

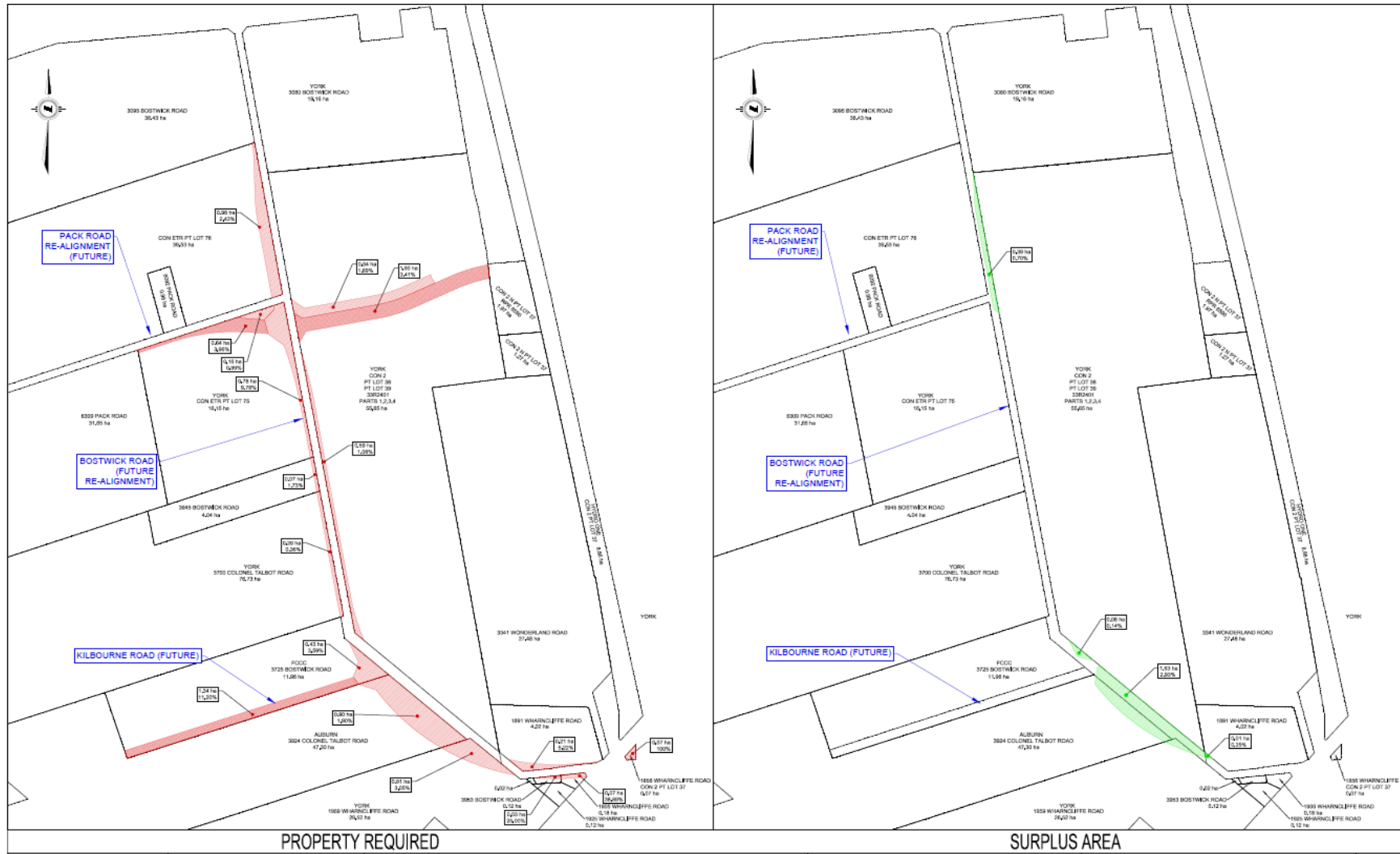


Figure 9: Preliminary Property Requirements and Surplus Lands

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Preliminary Construction Cost Estimate

Cost estimates were completed for a two-stage and a one-stage construction approach. Based on the financial analyses for the various implementation scenarios, it is recommended to construct Bostwick Road and Bradley Avenue to the ultimate four-lane configuration as one project each (i.e., one-stage approach) since the majority of the estimated cost for both roads occurs during the interim phase if these roads are constructed in two phases.

For a one stage construction approach, the cost estimates to construct Bostwick Road and Bradley Avenue in their ultimate configurations under one project each are \$18,128,400 and \$7,899,750, respectively. The breakdown of the cost estimate is shown below.

Bostwick Road – Ultimate Construction as One Project (2026)

Item	Estimated Cost (\$)
Road Widening Cost Estimates	
Roadworks and Earthworks	3,700,000
Storm Sewers	3,300,000
Traffic Signals and Illumination	850,000
Miscellaneous	650,000
Utility Relocation (10%)	988,000
Sub-total	9,488,000
Engineering and Consulting (15%)	1,423,200
Contingency (15%)	1,423,200
Property Acquisition*	4,000,000
Total Preliminary Cost Estimate	16,334,400
Lifecycle Renewal Cost Estimate	
Sanitary Sewers	690,000
Watermain	690,000
Sub-total	1,380,000
Engineering and Consulting (15%)	207,000
Contingency (20%)	207,000
Total Preliminary Cost Estimate	1,794,000

Bradley Avenue – Ultimate Construction as One Project (2028)

Item	Estimated Cost (\$)
Road Widening Cost Estimates	
Roadworks and Earthworks	2,350,000
Storm Sewers	800,000
Traffic Signals and Illumination	500,000
Miscellaneous	375,000
Utility Relocation (10%)	482,500
Sub-total	4,507,500
Engineering and Consulting (15%)	676,125
Contingency (20%)	676,125
Property Acquisition*	1,000,000
Total Preliminary Cost Estimate	6,859,750
Lifecycle Renewal Cost Estimate	
Sanitary Sewers	400,000
Watermain	400,000
Sub-total	800,000
Engineering and Consulting (15%)	120,000
Contingency (20%)	120,000
Total Preliminary Cost Estimate	1,040,000

Environmental Impacts and Mitigation

Impacts to the natural, socio-economic and cultural environments were considered through the evaluation process and mitigation measures were developed to address potential impacts.

Transportation

Temporary construction-related impacts to traffic flow on Bostwick Road and emergency services routes. A construction staging plan / traffic management plan will be developed to minimize impacts to traffic and EMS providers will continue to be contacted in future phases, particularly prior to construction.

Property

Property is needed to accommodate for realignment, widening and proposed improvements either via negotiations with property owners or through land dedication through development. It is estimated that approximately 11.8 Ha will be required to construct the roadways to their ultimate cross section. The realignment of Bostwick Road will result in surplus lands that can be sold to adjacent property owners or used for LID measures. Some land may also be used to relocate the North Lambeth SWMF Pond 3 to avoid additional property needs.

Bradley Avenue passes across a Hydro One corridor on the east end of the study area. The City will need to coordinate with Hydro One on the transfer of land to the City for the road right of way.

Access to property may also be temporarily restricted during construction. Notice will be given to those affected and efforts will be made to reduce the length of time that access is impacted.

Noise and Air Quality

No noise and air impacts are expected in the long term. Temporary impacts are likely to occur during construction and specific mitigation measures should be included into the construction contract.

Natural Environment

The alignment of Bostwick Road avoids most key environmental features and thus the chances of rare species impacts will be minimized. Nonetheless, impacts to vegetation will be confirmed in detail design and a compensation plan should be prepared. Wildlife movement and connectivity may become restricted once the alignments are constructed, thus the new culverts over Thornicroft Drain should be sized to allow for wildlife movement along the banks and the continuity of riparian habitat.

The study and design incorporate environmental buffers to protect sensitive ecological areas and designated lands. The buffer requirements are consistent with the City's policy and council approved guidelines (e.g., Environmental Management Guidelines). While these buffers were developed as a requirement of the EA, these buffers are not binding and may be reviewed and potentially refined during subsequent EISs undertaken as part of future developments.

Cultural Heritage / Archaeology

There may be some potential impacts to the driveways or accesses of properties of cultural heritage value. A Cultural Heritage Assessment will need to be completed in detail design to confirm the impacts and appropriate mitigation measures.

A Stage 2 Archaeological Assessment (AA) will be completed in detail design, when the City owns the land impacted by the realignment.

Future Commitments

Additional works that are required to be completed during the detail design phase of the project, prior to construction, are identified below.

Transportation/Technical Requirements

- Develop a traffic management plan to maintain vehicular access during construction.
- Confirm intersection configuration at Wharncliffe Road and Bostwick Road, particularly the need for double westbound left turn lanes.
- Undertake a roundabout operational analysis to verify performance and geometry for design parameters including fastest path, deflections, entry angle, speed differentials, sight distances etc.
- Confirm location and depths of utilities for impacts and relocation requirements. Consult with utility agencies regarding their regulations and requirements should additional approvals be required (e.g. Hydro One, Infrastructure Ontario).
- Coordinate with Hydro One on the transfer of land for the road right of way and also the completion of the MOI Class EA process.
- Liaise with London Transit Commission to ensure accommodation of future transit service on Bostwick Road and Bradley Avenue.

Drainage/Stormwater Management

- Finalize proposed stormwater outlet locations and servicing, particularly regarding work around Wharnccliffe Road and the crossing of Bostwick Road over the Thornicroft Drain.
- Undertake the necessary property acquisitions for the proposed stormwater management facilities (SWMF) in conjunction with proposed development plans or with any City initiated SWM project within the project area.
- Consider relocation of the North Lambeth SWMF P3 to optimize use of surplus lands.
- Complete the environmental assessment and design of the proposed SWMFs.
- Create a dual drainage hydraulic model including LID systems to confirm the connections between the sewer system and perforated pipe, backwater effects and distance between the leads of sewer system and perforated pipe.
- Detailed design of the trunk storm sewers should be coordinated with the SWMF design.
- Confirm proposed culvert sizes for the crossing of Thornicroft Drain and resulting 250-year flood levels. Confirm outlets, trunk storm sewer, LID and OGS design and location based on SWMFs.
- Confirm/adjust elevation of Bostwick Road to accommodate the confirmed 250-year flood levels to prevent overtopping the road.
- Ensure that adequate drainage for 3645 Bostwick Road be included as part of the detailed design for any reconstruction of Bostwick Road. Should the reconstruction of Bostwick Road be delayed, it is recommended that the City alleviate this situation on an interim, maintenance basis.

Socio-Economic Requirements

- Complete detailed property requirements and begin negotiations with affected property owners to purchase property required to implement the preferred design.
- Develop a landscaping plan for Bostwick Road and Bradley Avenue that includes aesthetic features such as roadside trees and vegetative plantings.
- Investigate the potential rezoning of the land use adjacent to the Bradley Avenue corridor to compensate for the loss of developable land.

Natural Environment Requirements

- Clearly define the vegetation removal areas and conduct a floral inventory in those areas to confirm the absence of Butternut and quantify the species being removed.
- Prepare a tree preservation plan to ensure the health of retained vegetation.
- Prepare a post-construction restoration/landscaping plan to compensate for removed vegetation and enhance buffer areas using native species.
- Consider including wildlife crossing features into Thornicroft Drain culvert design.
- Ensure that construction impact mitigation measures as described in the EIS are incorporated into construction contract documents.
- Prepare a detailed post-construction monitoring plan.

Cultural Heritage Requirements

- Complete a Cultural Heritage Evaluation/Impact Assessment.
- Complete a Stage 2 Archaeological Assessment.

Permits and Approvals

The applicable permits and approvals for this study include:

Regulatory Agency	Legislation	Permit/Approval	Comments
Provincial Government			
Ministry of the Environment, Conservation and Parks	Ontario Environmental Assessment Act	Schedule 'C' Class EA (Municipal Engineer's Association Class EA)	Satisfactory completion of EA requirements is a prerequisite for obtaining most other approvals. Will be required for the design of the proposed SWMFs.
	Ontario Water Resources Act	Permit to Take Water	Required if >50,000 L/d of surface or groundwater taken, includes temporary dewatering during construction
	Environmental Protection Act	Environmental Compliance Approval	Required prior to construction to ensure that the proposed works comply with MECP guidelines for the design of sanitary sewage systems, storm sewer systems and/or water systems
Ministry of Natural Resources and Forestry	Fish and Wildlife Conservation Act	License to Collect Fish for Scientific Purposes	Any area of streambed that will be accessed by industrial equipment will be isolated from the open waterbody, and any fish confined within the sequestered area will be rescued and relocated by a qualified biologist, under a License to Collect Fish for Scientific Purposes issued by the MNRF. This fish salvage will be completed prior to dewatering in order to prevent suffocation and mechanical harm.

Upper Thames River Conservation Authority	Development, Interference with Wetlands and Alterations to Shorelines and Watercourses regulation	Permit under ON. Reg. 157/06	Applies to areas along Thornicroft Drain and one of its tributaries near the northern project limits. Under this regulation, any development, site alteration, construction, or placement of fill within the regulated area requires a permit from UTRCA, as does interference with a wetland or any alteration to an existing watercourse channel.
Ministry of Infrastructure	Ontario Environmental Assessment Act	Category "B" Class EA Process for Realty Activities Other Than Electricity Projects (Approved 2004, Amended September 11, 2008)	Lands managed by Hydro One, on behalf of Infrastructure Ontario, are located within the study area. The purchase of IO-managed lands or disposal of rights and responsibilities (e.g. easement) for IO-managed lands triggers the application of the MOI Class EA.
Local Governments			
City of London	Noise Control By-Law	Exemption	Required to allow construction works outside of normal hours (9 pm to 7 am) and on weekends.
	Tree Bylaw	Permit	Required to remove trees on town-owned property (i.e. within road right-of-way).



Figure 2: Bostwick Road Realignment Preferred Option

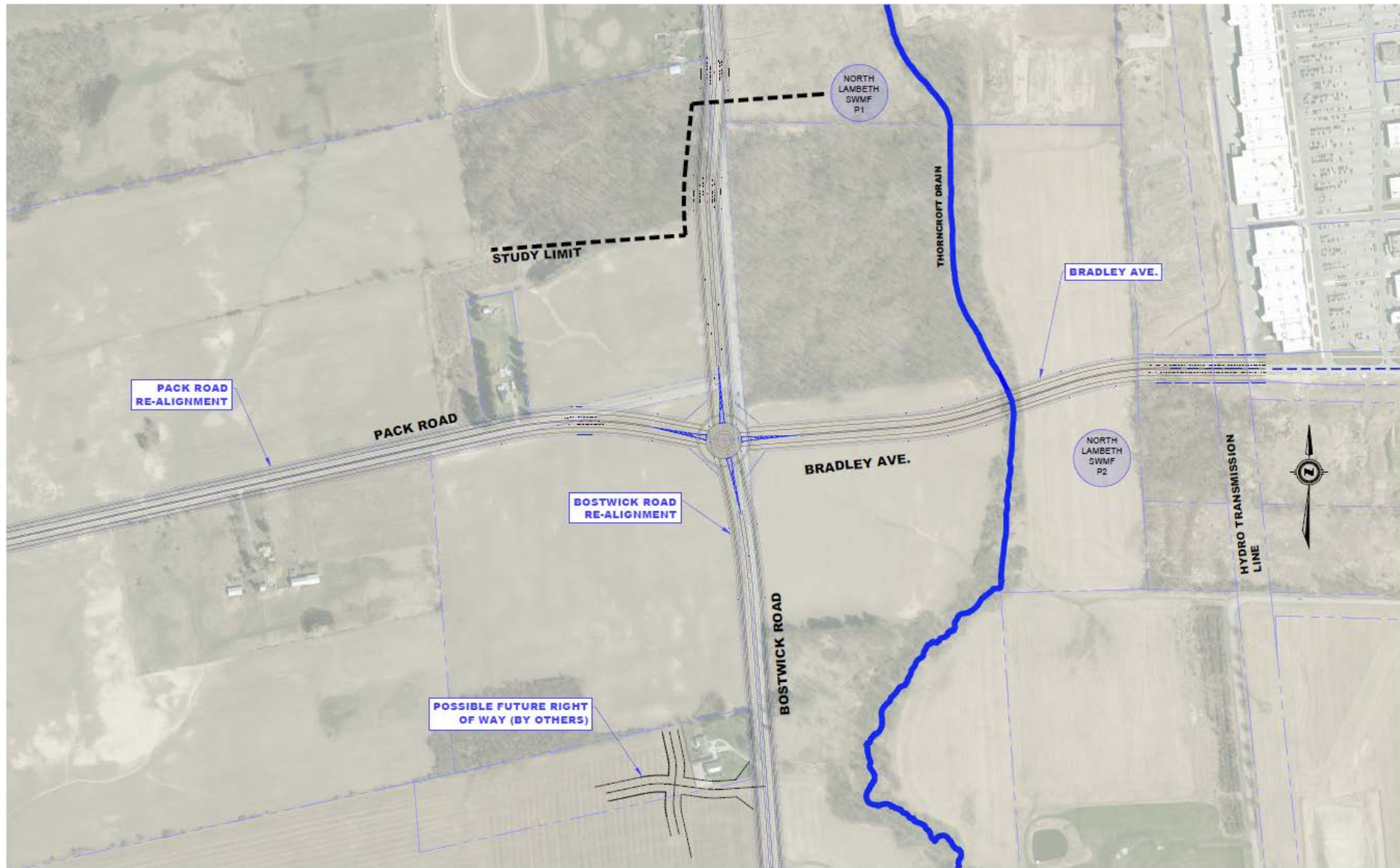


Figure 3: Bradley Avenue Preferred Option

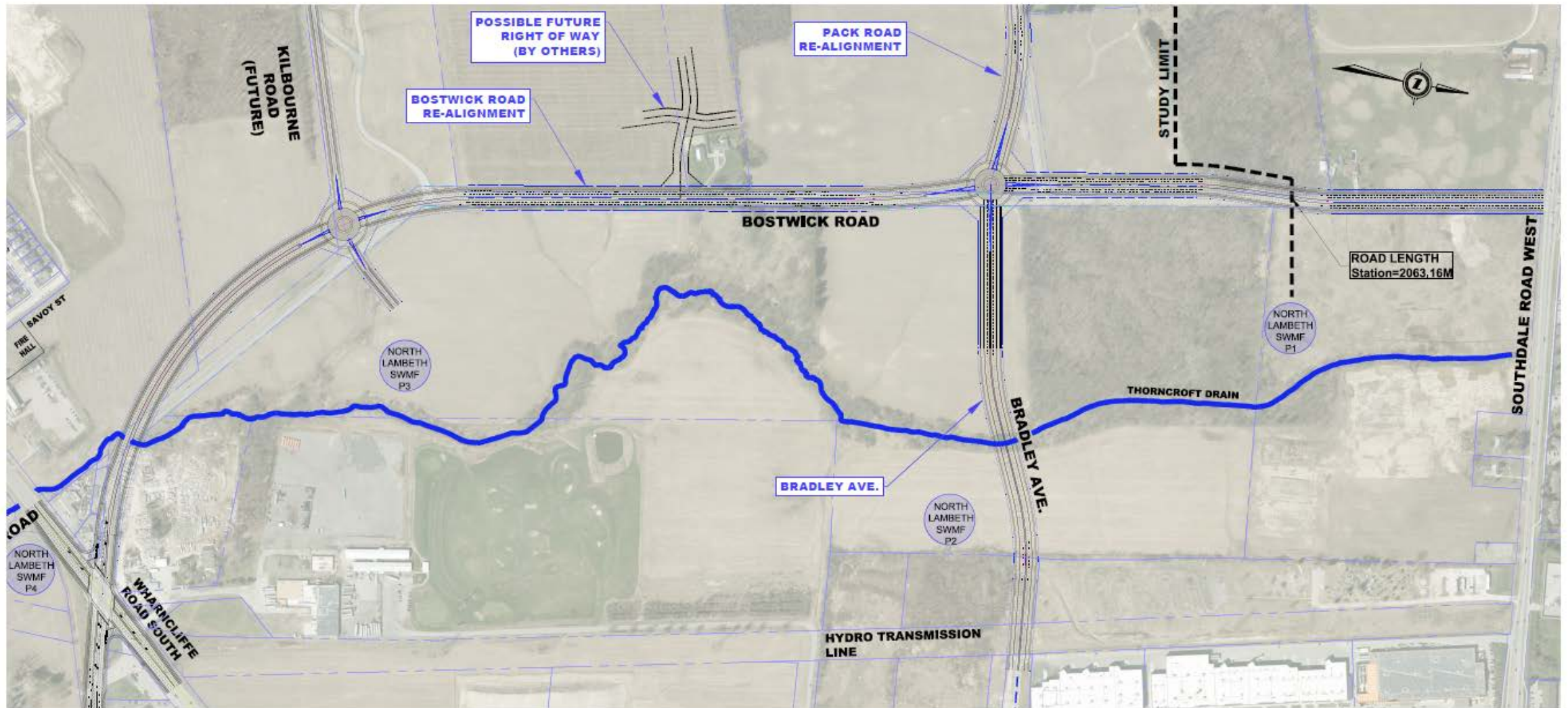


Figure 3: Ultimate Preferred Design Concept Option C for Bostwick Road



Figure 4: Ultimate Preferred Design Concept Option Y1 for Bradley Avenue Extension

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER
SUBJECT:	SOUTHDALE ROAD WEST AND BOSTWICK ROAD IMPROVEMENTS ENVIRONMENTAL STUDY REPORT

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 Southdale Road West / Bostwick Road Improvements Environmental Assessment:

- (a) The Southdale Road West / Bostwick Road Improvements Municipal Class Environmental Study Report **BE ACCEPTED**;
- (b) A Notice of Study Completion for the Project **BE FILED** with the Municipal Clerk; and
- (c) The Environmental Study Report **BE PLACED** on the public record for a 30 day review period.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Planning and Environmental Committee – October 15, 2012 – The Southwest Area Secondary Plan Report
- Strategic Priorities and Policy Committee – June 23, 2014 – Approval of 2014 Development Charges By-Law and DC Background Study
- Civic Works Committee – March 8, 2016 – Bostwick Road Environmental Assessment, Wharncliffe Road West to Pack Road, Appointment of Consulting Engineer
- Strategic Priorities and Policy Committee – June 9, 2016 – Growth Management Implementation Strategy (GMIS): 2017 Annual Review and Update – Appendix ‘F’: Detailed Commentary Regarding Developer Infrastructure Reports
- Civic Works Committee – January 10, 2017 – Southdale Road Environmental Assessment Appointment of Consulting Engineer

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 safe and convenient mobility choices for transit, automobile users, pedestrians, and cyclists through the improvement of roadways.

BACKGROUND

Purpose

This report provides Committee and Council with an overview of the Municipal Class Environmental Assessment (EA) for the Southdale Road West Environmental Assessment (EA) from Pine Valley Boulevard to Colonel Talbot Road, including a portion of Bostwick Road north of Pack Road and seeks approval to finalize the study. The completed Environmental Study Report (ESR) documents the EA process undertaken for the Southdale Road West/Pack Road Class EA.

Background

The Southdale Road West Improvements Class EA Study was carried out in accordance with Schedule 'C' of the Municipal Class Environmental Assessment (Class EA) document. The Class EA process is approved under the Ontario Environmental Assessment Act and outlines the process whereby municipalities can comply with the requirements of the Ontario Environmental Assessment Act.

The Class EA study has satisfied the requirements of the Ontario Environmental Assessment Act by providing a comprehensive, environmentally sound planning process with public participation, and facilitating dialogue with parties representing a number of diverse interests. This ESR documents the decision making process carried out during the Southdale Road West Improvements Class EA Study. See below Figure 1.0 which illustrates the study area.

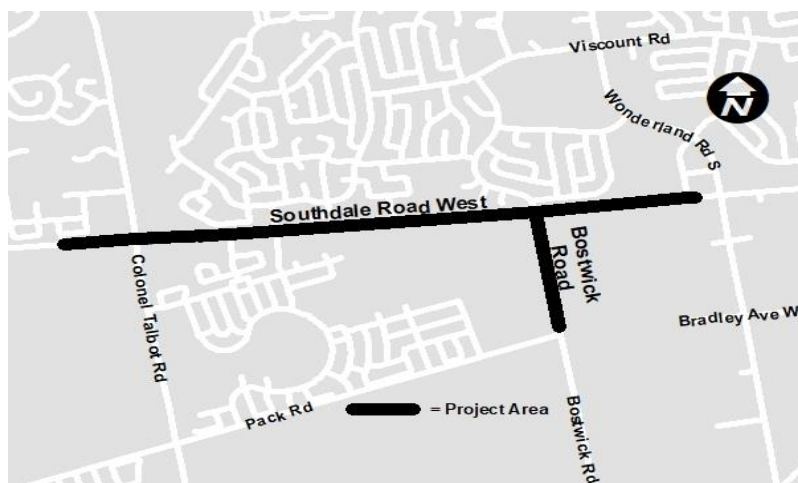


Figure 1.0 – Southdale Road West Improvements EA Study Area

Within the study area, Southdale Road West is a two-lane arterial roadway extending from Pine Valley Boulevard in the east to Colonel Talbot Road in the west. Also included in the study area is Bostwick Road which is a two-lane arterial road extending from Pack Road at the southern limit to Southdale Road West at the northern limit. The study area includes five intersections with: Southdale Road West/Pine Valley Boulevard, Southdale Road West/Bostwick Road, Southdale Road West/Tillman Road, Southdale Road West/Pomeroy Lane, Southdale Road West/Colonel Talbot Road, and Bostwick Road/Pack Road. Southdale Road West throughout the study area currently experiences congestion issues with increasing development in the area. The current posted speed along Southdale Road West is 60 km/hr east of Colonel Talbot Road, with Bostwick Road being 70 km/hr.

The EA identifies solutions to improve Southdale Road West. The proposed widening of Southdale Road West and Bostwick Road will allow for improved sightlines, operations, maintenance, and overall safety to meet the mobility and accessibility needs of all users, including an increased level of service to compliment the increased development and traffic within the study area and overall corridors. The project will allow for safer usage by emergency services, motorists, cyclists, and pedestrians by addressing existing capacity and safety issues.

Due to rising traffic volumes and developments in the area, the City identified a need for improvements along the Southdale Road West corridor, which included the portion of Bostwick Road to match into another on-going EA for the remainder of Bostwick Road (Bostwick Road Realignment MCEA). More recently, the City's Cycling Master Plan, The London Plan and the 2030 Transportation Master Plan show the importance of improvements to the Southdale Road West corridor for all modes of transportation to better and more safely connect the City's transportation network.

The London Plan

The London Plan, which encompasses the objectives and policies for the City's short and long-term physical land development, classifies this portion of Southdale Road West as a Civic Boulevard. The land use surrounding this portion of Southdale Road West is primarily Green Space, Environmental Review lands, Neighbourhoods, and Shopping Area. The London Plan classifies this portion of Bostwick Road as a Civic Boulevard, with the surround land use being the same as Southdale Road West.

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

2030 Transportation Master Plan (2013)

One of the five "Smart Moves" that form the basis of the TMP is a More Strategic Program of Road Network Improvements. There is a greater emphasis in this TMP on transit, active transportation, travel demand management, and safety. The City's approach to defining the need for road network improvements has become more strategic. This approach recognizes the targets for reduced modal share for the automobile by 2030 and is consistent with the City's expectation that transit and active transportation modal shares will increase significantly from current levels. The City's approach also explicitly recognizes that road improvements will be required for different purposes, including meeting capacity needs.

ENVIRONMENTAL ASSESSMENT SUMMARY

Project Description

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

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

Planning and Analysis of Alternatives

Phase I of the Municipal Class EA (MCEA) process involved the identification of the problem and opportunity statement. It was determined that as the City of London continues to grow and develop, new transportation infrastructure is required that recognizes the capacity needs of planned growth and the objectives of protecting established communities and business. Significant growth is anticipated along this portion of both Southdale Road West and Bostwick Road, including existing capacity and level of service issues.

Phase 2 of the MCEA process involved identifying alternative solutions (planning alternatives) to address the problem/opportunity statement.

The following six alternative solutions were examined as it relates to the Southdale Road West and Bostwick Road corridors:

- Alternative 1 – Do Nothing
 - Assumes no improvements will be made beyond those already planned and approved.
- Alternative 2 – Limit Growth
 - Assumes no improvements will be made beyond those already planned and approved and includes measures to limit development in the study area.
- Alternative 3 – Road Network Improvements
 - Includes potential improvements to nearby east/west roads (commissioners Road and Pack Road/Bradley Avenue Extension).
- Alternative 4 – Operational Improvements
 - Includes the implementation of additional turn lanes, traffic signal coordination, etc.
- Alternative 5 – Road Widening
 - Includes widening of Southdale Road West to provide additional traffic lanes to increase capacity.
- Alternative 6 – Transportation Demand Management (TDM)
 - Includes measures to reduce vehicle volumes by using bike lanes, and promoting transit.

The above identified alternative solutions were screened against the problem and opportunity statement listed above. The evaluation of alternative solutions was comprised of a two-step process. Firstly, Do Nothing, Limit Growth and Road Network Improvements were screened out because it was determined that these solutions will not address the Project needs as identified in the problem and opportunity statement.

Do Nothing – This was not carried forward for further assessment as, although this solution avoids impacts to natural environment, archaeological and cultural resources and costs less compared to other solutions, it does not address transportation planning and does not address the problem and opportunity statement identified for this project.

Limit Growth – This option was not carried forward as it does not comply with current City policies and does not address the problem and opportunity statement.

Road Network Improvements – This option was not carried forward for further assessment as it offers only limited improvements to capacity and level of services on Southdale Road West due to planned growth along the corridors and marginal diversion of traffic on other roads. This option does not address the problem and opportunity statement for this project.

Operational Improvements, Road Widening and TDM were carried forward for further assessment and were evaluated against the criteria developed for this Project in order to determine the preferred recommended solution. At the end of Phase 2 of the MCEA process, the recommended preferred solution for the Project was to widen Southdale Road West and Bostwick Road from 2 lanes to 4 lanes.

Design Alternatives

Phase 3 of the MCEA process involves the development and evaluation of alternative design concepts. The main outcome in this phase of the study was developing road cross-sections and layout concepts for the recommended planning solution.

Identification of the land requirements for this project was a key outcome to identify appropriate mitigation measures such as minimizing cultural, socio-economic and environmental impacts, while still meeting the City’s design standards.

The evaluation and identification of the preferred design was divided into two components:

- Road Widening Concepts
 - Evaluate widening of Southdale Road West to the north, widening to the south, and widening from the centreline.
 - Evaluate widening of Bostwick Road to the west, widening to the east, and widening about the centreline.
- Intersection Concepts
 - Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Colonel Talbot Road.
 - Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Bostwick Road.

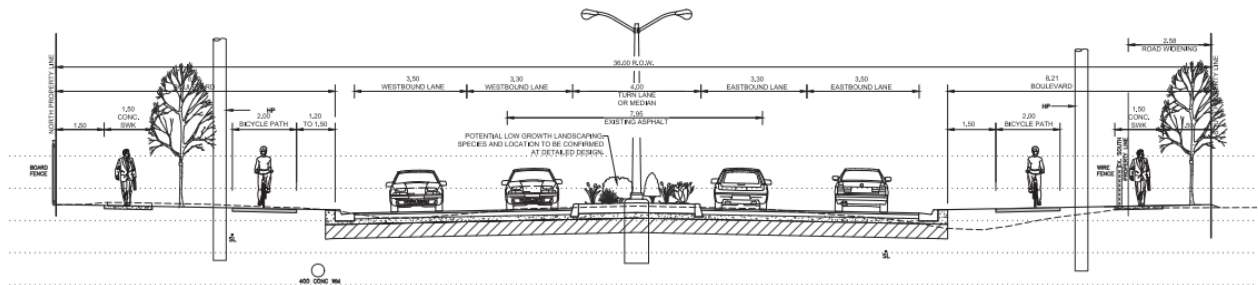
Recommended Alternative

The preferred recommended alternative for Southdale Road West and Bostwick Road considered transportation facilities for all road users (motorists, transit, cyclists and pedestrians as per the City’s Complete Streets requirements) and potential impacts natural, socio-economic and cultural features and costs. The preferred design was selected, developed and refined through extensive consultation with agencies, stakeholders and the public.

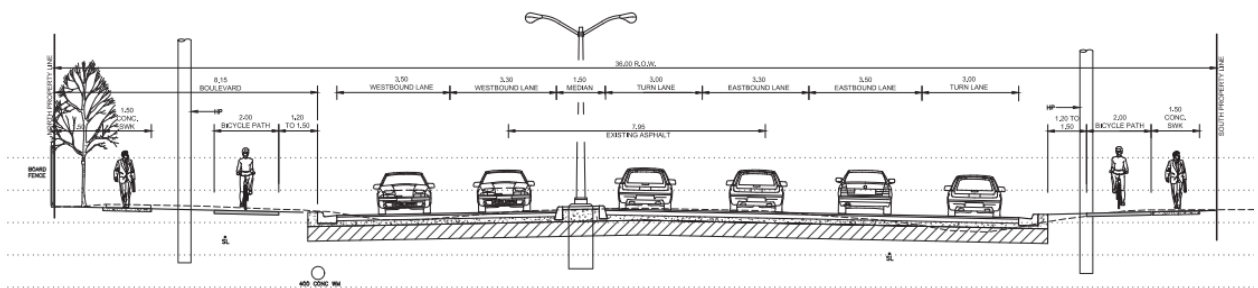
Summary	Preferred	Rationale
Road Alignment – Southdale Road West	Widen to the south	<ul style="list-style-type: none"> • Fewer property owners impacted. • Less property acquisitions required. • Less encroachments on existing park, stormwater and Hydro One Infrastructure. • Lower capital costs

Road Alignment – Bostwick Road	Widen from the centreline	<ul style="list-style-type: none"> • More equitable property acquisition from multiple property owners. • Less encroachment into either of the natural features.
Intersection – Southdale Road and Colonel Talbot Road	Roundabout (2 lane)	<ul style="list-style-type: none"> • More equitable property acquisition from multiple owners • Better addresses the Level of Service and capacity constraints both existing and projected.
Intersection – Southdale Road and Bostwick Road	Signalized	<ul style="list-style-type: none"> • Less property acquisitions required. • Lower overall capital costs • No known impacts on natural features or archaeological resources.

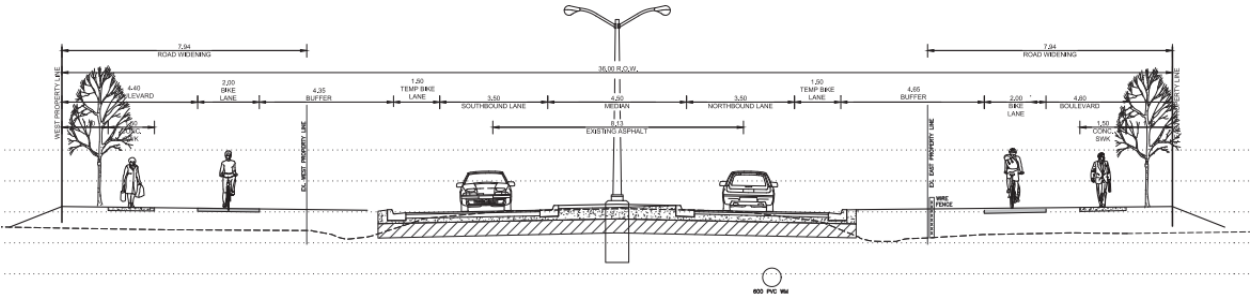
The proposed right-of-way widths along both Southdale Road West and Bostwick Road will generally be standardized to 36 m wide, with localized widenings or adjustments at the intersections. As a result, the cross-sections for each road will generally be standardized. Some details of each cross-section may vary subject to the location along the corridor, due to the presence of significant utilities or other features that may warrant a modified alignment of the sidewalks and/or bike paths. See the below typical cross-sections for both Southdale Road West and Bostwick Road. The cross-sections for Bostwick Road show both an interim solution and an ultimate solution. Initial implementation will likely be to the ultimate based on cost-effectiveness and subject to property availability.



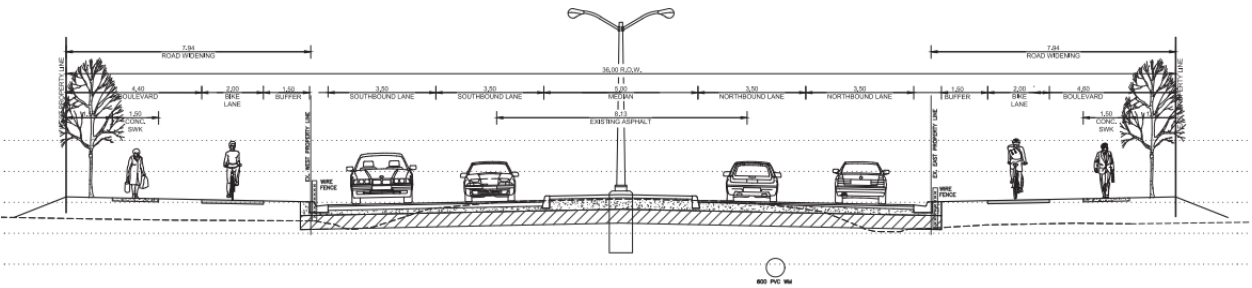
Southdale Road West Typical Cross Section



Southdale Road West Turn Lane Typical Cross Section



Bostwick Road Interim Cross Section



Bostwick Road Ultimate Cross Section

Each of the intersections within the study area will be reconstructed. All existing signalized intersections will generally be maintained, and reconstructed to accommodate the widened Southdale Road West or Bostwick Road cross-sections.

The Colonel Talbot Road intersection will be reconstructed, implementing a 2-lane roundabout at this location with pedestrian crossovers. The current proposed alignment and layout was created to minimize impacts to existing properties and utilities.



Southdale Road West / Colonel Talbot Road roundabout looking south east.

Existing driveways along these two corridors connect to the roadway at full access entrances. Through the implementation of the recommended alternative, the driveways will be adjusted as right-in right-out only accesses to accommodate the proposed cross-section and provide the safest access.

Public and Agency Consultation

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

A Notice of Study Commencement was issued in May of 2017 to inform the public of the initiation of the study. The study team received correspondence from the public and agencies indicating their interest in the study and requesting to be kept informed.

Public Information Centre No. 1 was held on November 2, 2017 to present the study, including information on existing conditions, alternative planning solutions, evaluation criteria and design considerations. It served as an opportunity for the public to review the project information, ask questions, and provide input to the members of the study team.

Public Information Centre No. 2 was held on May 3, 2018 as an opportunity for attendees to review the impact of the road improvement options on the social, cultural, economic, and natural environments as well as review the preliminary preferred design.

Agencies and stakeholders were notified at study milestones and during specific phases of the study which required an information update pertaining to them. In addition to formal public events, the project team conducted in-person meetings with stakeholders and agencies as requested and required. Presentations were made to the City of London Environmental and Ecological Planning Advisory Committee (EEPAC), Cycling Advisory Committee (CAC) and Transportation Advisory Committee (TAC) throughout the project.

IMPLEMENTATION

Construction Staging and Traffic Detouring

Completion of the full scope of the proposed works will be a significant undertaking. As a result, traffic through and within the project area would be impacted in some fashion over multiple years. Construction phasing and timing will have regard for the Environmental Assessment and will be established with the upcoming 2019 Development Charges Background Study.

Subject to approval and acceptance of this ESR, detailed design will be initiated. The design and approvals of the proposed project will include property requirements, agency approvals and program co-ordination. The proposed works are near term and can be phased to better coordinate with GMIS needs and Development Charges Study commitments. Commencement of construction for the Southdale Road West section between Pine Valley Boulevard and Bostwick Road is planned for 2022 with potential utility relocations in 2021 and will need to be coordinated with other major City projects. Network traffic management and a communications plan will be developed during detailed design to inform road users and instruct local traffic movement. Access to recreational, commercial and residential properties will be maintained during construction.

The subsequent plan for improvement projects for Southdale Road West (from Bostwick Road to Colonel Talbot) and Bostwick Road (from Pack Road to Southdale Road West) sections will continue to also be under review for near-term implementation. The timing and implementation of these sections will be determined based on the identified improvements, infrastructure needs and the Development Charges Background Study. The ESR will provide guidance for future property development including road widening dedication and access management requirements.

The project phasing may also be further subdivided to accelerate the construction of the Colonel Talbot Road roundabout based on capacity needs. This may be implemented due to its shorter construction period, and affords the opportunity to address a traffic constraint within the corridor.

FINANCIAL CONSIDERATIONS

Preliminary Cost Estimates

The estimated total project cost associated with the proposed improvements, including engineering, roadway construction, earthworks, stormwater management, watermain works, traffic signals and street lighting, utility relocations, landscaping, staging, and other project costs is approximately \$23.3 M. An additional investment of \$0.67 M for coordinated watermain and sanitary sewer lifecycle renewal will benefit from project efficiencies. The breakdown of the cost estimate with anticipated implementation timing based on a multi-stage approach is shown below. Figures are in 2018 dollars.

**Cost Estimate for Southdale Road West, Pine Valley to Bostwick Road
(including Bostwick Road)**

Transportation Cost Estimate	
Item	Estimated Cost (2018 \$)
Roadworks and Earthworks	3,620,000
Storm Sewers	830,000
Traffic Signals and Illumination	500,000
Miscellaneous	540,000
Sub-total	5,490,000
Property Acquisition	390,000
Utility Relocation	120,000
Contingency (15%)	900,000
Engineering and Consulting (15%)	900,000
Total Preliminary Cost Estimate	7,800,000
Lifecycle Renewal Cost Estimate	
Watermain	110,000
Sewer	80,000
Sub-total	190,000
Contingency (15%)	30,000
Engineering and Consulting (15%)	30,000
Total Preliminary Cost Estimate	250,000

Cost Estimate for Southdale Road West, Bostwick Road to Colonel Talbot Road

Transportation Cost Estimate	
Item	Estimated Cost (2018 \$)
Roadworks and Earthworks	8,430,000
Storm Sewers	1,250,000
Traffic Signals and Illumination	740,000
Miscellaneous	820,000
Sub-total	11,240,000
Property Acquisition	420,000
Utility Relocation	180,000
Contingency (15%)	1,800,000
Engineering and Consulting (15%)	1,800,000
Total Preliminary Cost Estimate	15,440,000
Lifecycle Renewal Cost Estimate	
Watermain	160,000
Sewer	120,000
Sub-total	280,000
Contingency (15%)	70,000
Engineering and Consulting (15%)	70,000
Total Preliminary Cost Estimate	420,000

The 2014 Development Charges Background Study includes a cost estimate of \$20 M for both phases of transportation work. This estimate was based on limited project information and made assumptions based on speculated impacts and construction staging having implications on schedule. The completion of this EA provides a much informed cost estimate for this unique project that has been used to inform the 2019 Development Charge Background Study development and enable better long-term financial planning. The final cost of the project will be influenced through detailed design, as mitigation measures are fully developed.

CONCLUSION

Improvements to the Southdale Road West and Bostwick Road corridors are necessary to address existing capacity issues, and adequately handle and protect for planned growth within the area. A Municipal Class Environmental Assessment (EA) was undertaken to confirm the detailed preferred solution to proceed in coordination with the required corridor improvements. The ESR is ready for final public review.

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

Six alternative planning solutions were developed and assessed against their ability to reasonably address the above problems and opportunities. Of the six alternatives, Alternative 5 – Road Widening was selected as the preferred planning solution. Key factors for the selected alternative include: improving safety, active transportation, better handled for increased growth, and addresses existing capacity issues to provide a much higher level of service.

Two alternative design concepts were developed and evaluated based on factors such as impact on areas of archaeological potential, built heritage resources, vegetation and existing environmental features, property, landscaping, cut/fill volumes, utilities, and opportunities for active transportation. The impact of these factors was similar between both alternative design features. Widening to the south on Southdale Road West, and widening around centre for Bostwick Road were the recommended preferred alternative. This was selected as it best addresses the project problem statement based on detailed evaluation and feedback received from the public. The above factors were most balanced with this chosen alternative and design criteria.

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

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

Construction of the first phase of improvements identified in the Southdale Road West and Bostwick Road EA is anticipated to begin in 2022 subject to property acquisition, approvals, finalization of the 2019 Development Charges Background Study and subsequent Growth Management Implementation Strategy updates.

Acknowledgements

This report was prepared with assistance from Matthew Davenport, E.I.T., and Ted Koza, P. Eng., of the Transportation Planning and Design Division.

PREPARED BY:	RECOMMENDED BY:
DOUG MACRAE, P. ENG., MPA DIRECTOR ROADS AND TRANSPORTATION	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL AND ENGINEERING SERVICES AND CITY ENGINEER

Attach: Appendix A – Environmental Study Report Executive Summary

c: Peter McAllister, AECOM Canada Ltd.

Appendix A

Environmental Study Report Executive Summary

Introduction

The City of London (the City) has completed a Municipal Class Environmental Assessment (MCEA) study to address necessary transportation infrastructure requirements along the Southdale Road West and Bostwick Road corridors. The Southdale Road West Improvements MCEA (hereafter the “Project”) is classified as a Schedule ‘C’ project in the Municipal Engineers Association (MEA) MCEA process (October 2000, as amended in 2007, 2011 and 2015), where project activities are subject to the full environmental assessment (EA) planning process of the MCEA.

Background

The City of London continues to develop and grow as a municipality. To accommodate this growth, new infrastructure is required that recognizes the capacity needs of planned growth and the objectives of protecting established communities and businesses. Southdale Road West is one of the major east-west arterial thoroughfare and access roadways into the City of London, connecting the southwest corner of the City and areas to the west, through to the central and easterly areas of the City. It serves as a major corridor for economic, social, urban, and transportation development, and is located at the south and west edges of existing built up area, the north edge of what will be an area of future development in the near term.

This widening project was identified as a priority in the City of London’s 2030 Transportation Master Plan (TMP), the guiding policy document for future transportation planning and as part of the Growth Management Implementation Strategy (GMIS) for transportation projects. The need for capacity improvements was also identified as part of the 2014 Development Charge Background Study, including phasing. The City of London is considering the widening of this corridor from Colonel Talbot Road to Pine Valley Boulevard, from 2 to 4 lanes, beginning with the phase from Pine Valley Boulevard to Farnham Road in 2022.

Bostwick Road, from Southdale Road West to north of Pack Road, while not covered in the TMP, improvements to this corridor have been considered in this study to support anticipated future development within and adjacent to the study area.

Problem/Opportunity Statement

The MCEA Problem/Opportunity Statement provides the basis for the need and justification for this project and aligns with the recommendations of the TMP.

Problem: As the City of London continues to grow and develop, new transportation infrastructure is required that recognizes the capacity needs of planned growth and the objectives of protecting established communities and businesses. Significant growth is anticipated along the south side of Southdale Road West between Tillman Road and Pine Valley Boulevard, and some areas along the corridor are experiencing traffic delays during peak periods. In addition, the new Southwest Optimist Community Centre and YMCA will increase vehicular, pedestrian and cycling traffic along this section of Southdale Road West. Considering this, and modeling through the City’s Transportation Master Plan, the existing two lane road will not have sufficient capacity to accommodate the projected growth and number of road users. Improvements are also needed on Bostwick Road from Southdale Road West to Pack Road. It is anticipated that the existing two lane roads will not have sufficient capacity to accommodate the projected growth and number of road users.

Five year collision review indicates rear-end collisions were reported as the most prevalent type of traffic impact in the study area. This can be attributed to relatively high speed limits and the lack of passing opportunities.

Opportunity: By following the **Complete Streets** approach, there is an opportunity to improve Southdale Road West (Pine Valley Boulevard to Colonel Talbot Road) and Bostwick Road (Pack Road to Southdale Road West) to accommodate the existing and future traffic demand (including transit and active transportation), and provide better connectivity to adjacent neighbourhoods for the overall road network.

A **‘Complete Street’** is designed for all ages, abilities and modes of travel. On Complete Streets, safe and comfortable access for pedestrians, bicycles, transit users and people with disabilities is not an afterthought, but an integral planning feature (Source: Complete Streets Canada).

This project also has the ability to align with the principles of **Vision Zero**, a global movement that has been adopted by the City to eliminate traffic injuries and fatalities caused by vehicular collisions. Vision Zero London is the City’s road safety strategy to reduce the number and severity of collisions occurring within the City and increase road safety for cyclists, motorists and pedestrians. (Source: City of London).

Alternative Planning Solutions

For the purposes of the Southdale Road West Improvements MCEA, planning solutions to the undertaking include:

1. **Do Nothing** – Assumes no improvements will be made beyond those already planned and approved.
2. **Limit Growth** - Assumes no improvements will be made beyond those already planned and approved and includes measures to limit development in the study area.
3. **Road Network Improvements** – Includes potential improvements to nearby east/west roads (Commissioners Road and Pack Road/Bradley Avenue Extension)
4. **Operational Improvements** – includes the implementation of additional turn lanes, traffic signal coordination, etc.
5. **Road Widening** – includes widening of Southdale Road West to provide additional traffic lanes to increase capacity.
6. **Transportation Demand Management (TDM)** – Includes measures to reduce vehicle volumes by using bike lanes, and promoting transit.

The above identified alternative solutions were screened against the problem and opportunity statement identified in Section 5 of this Report. The evaluation of alternative solutions is comprised of a two-step process. Firstly, Do Nothing, Limit Growth and Road Network Improvements were screened out because it was determined that these solutions will not address the project needs as identified in the problem and opportunity statement in Section 4.

Do Nothing – This was not carried forward for further assessment as, although this solution avoids impacts to natural environment, archaeological and cultural resources and costs less compared to other solutions, it does not address transportation planning and does not address the problem and opportunity statement identified for this project.

Limit Growth – This option was not carried forward as it does not comply with current City policies and does not address the problem and opportunity statement.

Road Network Improvements - This option was not carried forward for further assessment as it offers only limited improvements to capacity and level of service on Southdale Road West due to planned growth along corridor and marginal diversion of traffic on other roads. This option does not address the problem and opportunity statement for this project.

Next, the remaining alternative solutions, (Operational Improvements, Road Widening and TDM), were carried forward for further assessment and were evaluated against the criteria developed for the project in order to determine the preferred recommended solution.

Alternative Design Solutions

At the end of Phase 2 of the MCEA process, the recommended preferred solution for the project was to widen Southdale Road West and Bostwick Road from 2 lanes to 4 lanes. Phase 3 identifies the alignment for the preferred solution of widening and evaluates intersection types (roundabouts or signalized).

The evaluation and identification of the preferred design is divided into two components:

A: Road Widening Concepts

- Evaluate widening of Southdale Road West to the north, widening to the south, and widening from the centerline.
- Evaluate widening of Bostwick Road to the west, widening to the east, and widening about the centerline.

B: Intersection Concepts:

- Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Colonel Talbot Road.
- Evaluate alternatives for the intersection (signalized or roundabout) at Southdale Road West and Bostwick Road.

Preferred Design Solution

The Preferred Design for Southdale Road West and Bostwick Road (**Figure ES1**) considered transportation facilities for all road users (motorists, transit, cyclists and pedestrians as per the City’s Complete Streets requirements) and potential impacts to natural, socio-economic and cultural features and costs. The preferred design was selected, developed and refined through extensive consultation with agencies, stakeholders and the public.

Summary of Preferred Design

Summary	Preferred	Rationale
Road Alignment – Southdale Road West	Widen to the south	<ul style="list-style-type: none"> • Fewer property owners impacted • Less property acquisition required • Less encroachments on existing park, stormwater and Hydro One infrastructure • Lower capital costs
Road Alignment – Bostwick Road	Widen from the centerline	<ul style="list-style-type: none"> • More equitable property acquisition from multiple property owners • Less encroachment into either of the natural features
Intersection – Southdale Road and Colonel Talbot Road	Roundabout (2 lane)	<ul style="list-style-type: none"> • More equitable property acquisition from multiple property owners
Intersection – Southdale Road and Bostwick Road	Signalized	<ul style="list-style-type: none"> • Less property acquisition required • Lower overall capital costs • No known impacts on natural features or archaeological resources

Cross Section Elements

The proposed right-of-way widths along both Southdale Road West and Bostwick Road will generally be standardized to 36.0m wide, with localized widenings or adjustments at the

intersections. As a result, the cross sections for each road will also generally be standardized. Some details of each cross section may vary subject to the location along the corridor, due to the presence of significant utilities or other features that may warrant a modified alignment of the sidewalks and/or bike paths.

Each of the intersections within the study area will be reconstructed. All existing signalized intersections will generally be maintained, and reconstructed to accommodate the widened Southdale Road West or Bostwick Road cross section.

The Colonel Talbot Road intersection will be reconstructed, implementing a 2-lane roundabout at this location. The current proposed alignment and layout was created to minimize impacts to existing properties and utilities. The exact layout of the intersection will need to be further refined during detailed design to address any final grading transitions to adjacent properties or the adjacent SWM facility.

Construction Staging and Traffic Detouring

Completion of the full scope of the proposed work will be a significant undertaking. As a result, traffic through and within the project area would be impacted in some fashion over the course of an expected 2-year period, for each phase of the project, subject to the actual staging and stage duration. Therefore, consideration should be given to the staging and sequencing of construction and traffic management.

Implementation Schedule

Project Phase	Project Component
Phase 1	Southdale Road: Farnham Road to Pine Valley Boulevard
Phase 2	Southdale Road: Colonel Talbot Road to Farnham Road
Phase 3	Bostwick Road: Southdale Road West to south limits of study area

To accommodate the potential 2-year construction window for each phase, the project is to be reviewed to determine what impacts may occur to the local residents and traveling public during that time. Each phase will have varying degrees of impact, with the most significant impact occurring during the first year of each phase.

The project may also be further subdivided to consider the reconstruction of the Colonel Talbot Road intersection to construct the new roundabout. This may be implemented due to its shorter construction period, and affords the opportunity to address a significant traffic bottleneck within the corridor.

The actual staging and duration of the project will be reviewed further as part of detailed design, and could be adjusted subject to design and approvals timing, complexity of construction, approved budgets, and other factors that may alter the overall project duration or how it is constructed.

Preliminary Construction Cost Estimate

The total preliminary construction estimate for this project is **\$23.2MM**, including 15% contingency and 15% engineering. Cost estimate includes preliminary estimates for potential property acquisition requirements.

Preliminary Project Cost Estimate

Item	Colonel Talbot Road to Bostwick Road	Bostwick Road to Pine Valley Boulevard and Bostwick Road	Project Total
Road Works	\$ 8,181,660	\$ 3,454,440	\$ 11,636,100
Removals	\$ 252,285	\$ 168,190	\$ 420,475
Storm Sewers	\$ 1,244,514	\$ 829,676	\$ 2,074,190
Traffic Signals	\$ 381,000	\$ 254,000	\$ 635,000
Streetlights	\$ 363,000	\$ 242,000	\$ 605,000
Miscellaneous	\$ 818,282	\$ 545,520	\$ 1,363,802
Watermain	\$ 158,250	\$ 105,500	\$ 263,750
Sanitary Sewers	\$ 124,950	\$ 83,300	\$ 208,250
SUBTOTAL	\$ 11,523,941	\$ 5,682,626	\$ 17,206,567
Utility Relocation	\$ 180,000	\$ 120,000	\$ 300,000
Engineering (15%)	\$ 1,943,077	\$ 995,385	\$ 2,938,462
Contingency (15%)	\$ 1,753,111	\$ 952,074	\$ 2,705,185
Property Acquisition	\$ 426,600	\$ 394,400	\$ 821,000
TOTAL	\$ 15,826,729	\$ 8,144,485	\$ 23,971,214

* Utilities relocation costs to be shared between City of London and utilities owners. Exact cost sharing agreement and values to be confirmed during detailed design and approvals process.

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT:	RFP19-03 TREE INVENTORY UPDATE

RECOMMENDATION

That, on the recommendation of the Managing Director, Environmental & Engineering Services & City Engineer, following actions **BE TAKEN** with respect to the award of Tree Inventory Update:

- a) That approval hereby **BE GIVEN** to enter into a one year with two additional option years contract for Tree inventory Update to Davey Tree Expert Co. of Canada, Limited, 500 – 611 Tradewind Drive, Ancaster, Ontario, L9G 4V5; at a total cost of \$517,000 (excluding HST);
- b) The financing for this purchase **BE APPROVED** in accordance with the Sources of Financing Report attached hereto as Appendix A;
- c) That Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this contracts;
- d) Approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract or having a purchase order relating to the subject matter of this approval; and,
- e) The Mayor and City clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

BACKGROUND

Purpose

The purpose of this report is to seek Council approval to establish a one year with two additional optional years single source contract with Davey Tree Expert Co. of Canada, Limited to provide tree inventory update services for the City of London Road Operations and Forestry Division.

The intent of this project is to update the existing inventory of over 150,000 trees within the public right of way in addition to trees in common areas, city owned facilities and parks. The project will also confirm and add to the existing future planting locations list.

This project includes a tree condition assessment to assist with our Council approved Urban Forest Strategy and risk management objectives.

There is an option to renew this project for an additional year to collect data around City facilities and golf courses.

DISCUSSION

Purchasing Process

An open, publicly advertised Request for Proposal was issued January 8th, 2019 for the tree inventory update. Two potential bidders submitted documents but after being reviewed and evaluated by the Evaluation Team, subsequently only one bidder; Davey Tree Expert Co. met the requirements. The second bid received from Aecon Utility Engineering did not meet the minimum score threshold. The submissions were reviewed and evaluated by a team with representation from Roadside Operations and Forestry with the assistance of Purchasing and Supply as per the Procurement of Goods and Services Policy.

Financial Impact

The estimated expenditure in 2019 is \$517,000. Funding for this project is available in account PD 2047, as detailed in Appendix A (attached) Source of Financing.

CONCLUSION

Civic Administration have reviewed the submissions and recommends that Davey Tree Expert Co. of Canada Inc. be awarded the contract, it being noted that only one bidder met the expectations asked in the request for proposal.

Acknowledgements

This report was prepared by Andy Beaton, Manager, Forestry Operation, Jill-Anne Spence, Manager, Roadside Operations and Forestry and John Stevely, Procurement Officer, Purchasing and Supply.

SUBMITTED BY:	REVIEWED AND CONCURED BY:
JOHN PARSONS C.E.T DIVISION MANAGER, ROAD OPERATIONS AND FORESTRY	DOUG MACRAE, P. ENG, MPA DIRECTOR, ROADS & TRANSPORTATION
RECOMMENDED BY:	
KELLY SCHERR, P. ENG, MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER	

Appendix A: Source of Financing

APPENDIX 'A'

Chair and Members
Civic Works Committee

#19030
April 2, 2019
(Award Contract)

**RE: RFP19-03 Tree Inventory Update
(Subledger NT19PK02)
Capital Project PD2047 - Urban Forest Strategy
Davey Tree Expert Co. of Canada, Limited - \$517,000.00 (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:

<u>ESTIMATED EXPENDITURES</u>	<u>Approved Budget</u>	<u>Revised Budget</u>	<u>Committed To Date</u>	<u>This Submission</u>	<u>Balance for Future Work</u>
Engineering		\$49,389	\$49,389		\$0
Construction	2,400,000	2,350,408	1,069,879	526,099	754,430
City Related Expenses		203	203		0
NET ESTIMATED EXPENDITURES	<u>\$2,400,000</u>	<u>\$2,400,000</u>	<u>\$1,119,471</u>	<u>\$526,099</u> 1)	<u>\$754,430</u>

SOURCE OF FINANCING:

Capital Levy	\$600,000	\$600,000	\$600,000		\$0
Drawdown from Economic Development R.F.	1,800,000	1,800,000	519,471	526,099	754,430
TOTAL FINANCING	<u>\$2,400,000</u>	<u>\$2,400,000</u>	<u>\$1,119,471</u>	<u>\$526,099</u>	<u>\$754,430</u>

Financial Note:

1) Contract Price	\$517,000
Add: HST @13%	67,210
Total Contract Price Including Taxes	584,210
Less: HST Rebate	58,111
Net Contract Price	<u>\$526,099</u>

lp

Jason Davies
Manager of Financial Planning & Policy

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR – ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT:	SINGLE SOURCE PROCUREMENT MATERIAL RECOVERY FACILITY OLD CORRUGATED CARDBOARD SCREEN UPGRADE

RECOMMENDATION

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

- a) Approval **BE GIVEN** to exercise the single source provisions section 14.4 (d)(e) of the Procurement of Goods and Services Policy for purchase and installation of new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing Old Corrugated Cardboard Screen at the Material Recovery Facility for a cost greater than \$50,000;
- b) Single Source negotiated price **BE ACCEPTED** to hire Miller Waste Systems Inc., to purchase and install new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing Old Corrugated Cardboard Screen at the Materials Recovery Facility for a total estimated price of \$140,416.01 plus HST;
- c) Funding for this purchase **BE RELEASED** as set out in the Source of Financing Report attached hereto as Appendix "A", conditional that satisfactory terms and conditions can be negotiated and approved;
- d) Civic Administration **BE AUTHORIZED** to undertake all administrative acts that are necessary in connection with this purchase and the reallocation of the necessary capital funds; and,
- e) Approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract or having a purchase order, or contract record relating to the subject matter of this approval.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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Relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Short-Term Contract Amendment for Recycling Services (October 30, 2018 meeting of the Civic Works Committee (CWC), Item #2.6)
- Updates: Proposed Amended Blue Box Program Plan; Food and Organic Waste Framework & Policy Statement; and Next Steps (May 28, 2018 meeting of the CWC, Item #2.9)
- Exercise Renewal Options for Curbside Collection and Material Recovery Facility Operations Contracts (January 9, 2018 meeting of the CWC, Item #3)
- 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)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of solid waste management in its 2015-2019 - Strategic Plan for the City of London ([2015 – 2019 Strategic Plan](#)) as follows:

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 seek approval to exercise the single source provisions outlined in section 14.4 (d) (e) of the Procurement of Goods and Services Policy for purchase and installation of new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing Old Corrugated Cardboard (OCC) screen at the Material Recovery Facility (MRF) to improve the quality of paper products as end markets specifications continue to tighten.

CONTEXT

Miller Waste Systems Inc. (Miller Waste) was the successful proponent of the City of London RFP 08-03 Design, Construction and Operation of a Materials Recovery Facility (RFP 08-03). In fulfilling the requirements of RFP 08-03, Miller Waste engaged Machinex Industries (Machinex) as the main MRF sorting equipment supplier. Miller and Machinex have completed a number of similar projects in this arrangement (i.e., Miller as the design, build, operate proponent and Machinex as the sorting equipment supplier).

Miller Waste is currently operating the MRF under an amended agreement with the City. The amended agreement requires Miller Waste to sort, capture and sell recovered Blue Box materials that are received at the MRF for processing. The equipment installed to complete this work was selected based on the composition of the Blue Box materials that were to be received, the ability to ensure specified material capture rates within RFP 08-03, and end market criteria for recovered materials at the time RFP 08-03 was awarded (2010).

The composition of the Blue Box materials received and end market criteria for recovered materials have changed significantly since 2010. The main driver of this significant market change/tightening is the Chinese government's implementation of the National Sword program which has significantly limited North American access to the previously large Chinese recovered material market.

To address market conditions, Miller Waste has increased the number of sorters at the MRF and adjusted processing arrangements to increase quality control at certain key functional areas. The addition of mechanical changes is now a requirement as lower cost and/or more flexible solutions have been exhausted.

DISCUSSION

Updates on End Markets for Recovered Blue Box Materials

City staff have provided a number of updates to Committee and Council regarding the challenges with recyclable material end markets through both the budget monitoring and development process and through CWC reports on related topics. A brief timeline of the updates is below:

- 2017 year end, Chinese National Sword program identified as an emerging issue as part of budget monitoring process;
- 2018 mid-year, Chinese National Sword Program identified as likely to significantly limit North American access to the previously large Chinese market for recovered Blue Box materials, with the potential to significantly impact the budgeted revenue for recovered Blue Box materials;
- 2018 year-end, as a result of the significantly limited access to the Chinese market place, other global markets have become saturated with materials. This has resulted in a significant downward pressure on the market place and tightened specifications for recovered materials. For the majority of 2018, the Blue Box materials recovered from the MRF were able to be sold for revenues close to budget as a result of the high quality of materials produced and the end market relationships of Miller Waste. Currently recovered material end markets have deteriorated to a point where these advantages are no longer sufficient to obtain the revenues anticipated for recovered materials (predominantly paper products) without capital investment to address tightened market specifications.

Changing Composition of Blue Box Materials Received for Processing

The size and nature of OCC and Boxboard (e.g., cereal boxes, tissue boxes, small packaging boxes used for shipping items ordered from on-line shopping) received at the MRF for processing has changed significantly since the facility was designed and constructed. In general, there has been a significant increase in the amount of small OCC and Boxboard received for processing.

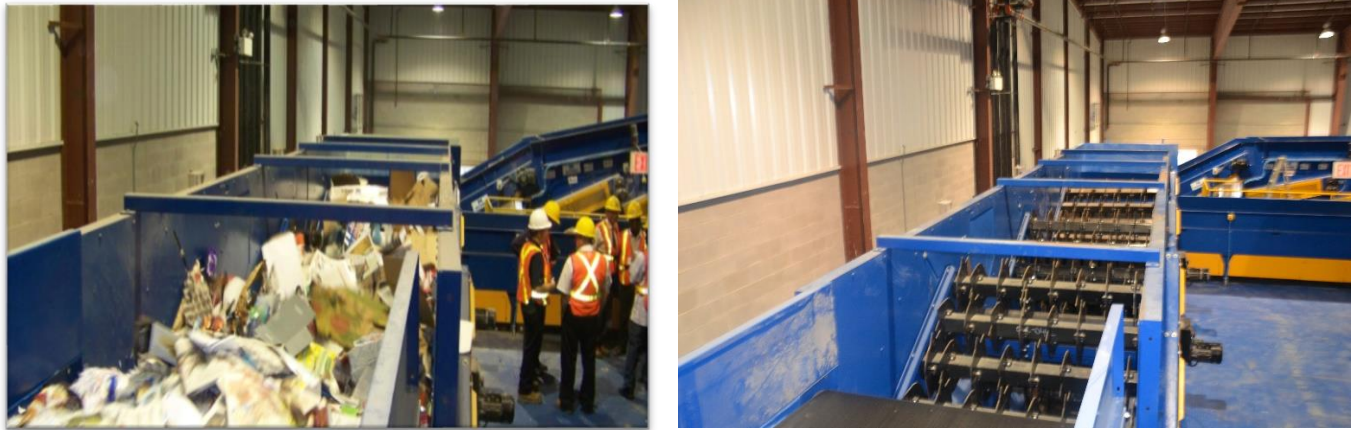
Smaller OCC and Boxboard is difficult to capture with the larger OCC and Boxboard (where it belongs) as the disc spacing of the current OCC screen is larger than the small pieces of OCC and Boxboard. As a result the smaller OCC and Boxboard falls through the screen and ends-up with the Newsprint where it is difficult to be further separated, as the items are similar in size. Recent audits of bales of recovered Newsprint indicate they contain approximately 25% to 30% by weight of small OCC and Boxboard. This percentage is problematic for end markets and is downgrading the value paid for the material. OCC and Boxboard is a different type of paper fibre from Newsprint and is a challenge for recovered Newsprint end markets to manage OCC and Boxboard in their production processes

Improvements to OCC Sorting Equipment

Upgrading the current OCC screen will enhance the MRFs ability to capture the small OCC and Boxboard with the larger OCC. The OCC screen upgrade will also enhance the quality of the recovered Newsprint products produced at the MRF. A brief summary of the changes to be made include:

- Existing frame, motors and oilers will be retained;
- Screen shafts and bearing assemblies will be replaced with larger square shafts; and
- Ancillary equipment such as guarding, fire suppressant piping will be replaced to accommodate the screen changes

Figure 1: Paper products moving across the triple deck OCC sorter. Upgrades will be made to this piece of equipment



Business Case

The table below summarizes the business case for upgrading the MRF OCC screen.

Simple Payback		
Recovered Newsprint Shipped to Market in 2018	13,000	Tonnes
Small OCC/Boxboard Content (estimated at 25% by weight)	3,250	Tonnes
Captured Small OCC/Boxboard with Screen Upgrade (60%) ⁽¹⁾	1,950	Tonnes
Purchase and installation price of required equipment	\$140,416	\$
Estimated annual, additional small OCC/Boxboard revenue ⁽²⁾	\$215,000	\$
Approximate Simple Payback Period	0.7	Years

(1) A conservative estimate of 60% capture efficiency was used for payback analysis. Actual capture rate may be greater producing higher revenues.

(2) Assumes obtaining \$110/tonne for small OCC and boxboard recovered.

Purchasing Process

It is recommended that this purchase be a single source purchase based on the following rationale in accordance with the Procurement of Goods and Services Policy:

14.4(d) "There is a need for compatibility with goods and/or services previously acquired...."

The existing OCC screen is not being replaced but upgraded and as such the upgraded screen decks and ancillary equipment is required to be compatible with the original equipment suppliers frame, motors and oilers (i.e., Miller Waste/Machinex)

14.4(e) "The required goods and services are to be supplied by a particular supplier(s) having special knowledge, skills, expertise or experience."

Miller Waste is the existing operator of the MRF. It is in the best interest of the City to hire Miller Waste to complete this upgrade as they will be able to schedule the work to be completed so as to not adversely impact MRF operations. Further hiring Miller Waste will not adversely impact existing contract obligations in terms of material specific capture rates.

In addition 7.4 of the Purchasing Policy allows the Managing Director in conjunction with the Manager of Purchasing to specify a specific product for essential functionality purposes. It is very advantageous for the City to maintain the existing equipment in the MRF versus introducing modifications based on equipment from a different supplier.

Financial Impact

Capital Budget:

The Capital budget for equipment upgrades is in the approved, original budget for the MRF. The funding is identified in Appendix A (Source of Financing attached). This equipment upgrade has a capital budget of \$140,416.01 plus HST.

Operating Budget:

There are no new operating costs for the equipment.

CONCLUSION

Based on discussion and the analysis above, Solid Waste Management are recommending the single source purchase and installation of new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing OCC screen. The new equipment will substantially reduce the smaller OCC and Boxboard that falls through the screen and ends-up with the Newsprint where it is difficult to be further separated. The approximate simple payback period is about 0.7 years or about 8 months.

Acknowledgements

This report has been reviewed and supported by Purchasing & Supply.

PREPARED BY:	PREPARED AND SUBMITTED BY:
MICHAEL LOSEE, B.SC. DIVISION MANAGER SOLID WASTE MANAGEMENT	JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE
RECOMMENDED BY:	
KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER	

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Appendix A - Source of Financing

c: John Freeman, Manager of Purchasing & Supply

Appendix A
Source of Financing

APPENDIX 'A'

Chair and Members
Civic Works Committee

#19039
April 2, 2019
(Award Contract)

**RE: Material Recovery Facility Old Corrugated Cardboard Screen Upgrade
(Subledger LF190004)
Capital Project SW6047 - Material Recovery Facility
Miller Waste Systems Inc. - \$140,416.01 (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:

<u>ESTIMATED EXPENDITURES</u>	<u>Approved Budget</u>	<u>Committed To Date</u>	<u>This Submission</u>	<u>Balance for Future Work</u>
Engineering	\$330,001	\$266,209		\$63,792
Construction	22,351,802	22,046,826	\$140,416	164,560
City Related Expenses	50,000	17,697		32,303
NET ESTIMATED EXPENDITURES	<u>\$22,731,803</u>	<u>\$22,330,732</u>	<u>\$140,416</u> 1)	<u>\$260,655</u>
<u>SOURCE OF FINANCING:</u>				
Federal Gas Tax	\$18,009,660	\$17,608,589	\$140,416	\$260,655
Waste Diversion Ontario	\$4,722,143	\$4,722,143		
TOTAL FINANCING	<u>\$22,731,803</u>	<u>\$22,330,732</u>	<u>\$140,416</u>	<u>\$260,655</u>

Financial Note:

1) Contract Price	\$140,416
Add: HST @13%	18,254
Total Contract Price Including Taxes	158,670
Less: HST Rebate	18,254
Net Contract Price	<u>\$140,416</u>

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Jason Davies
Manager of Financial Planning & Policy

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET, & SOLID WASTE
SUBJECT:	2014-2018 COMMUNITY ENERGY ACTION PLAN – FINAL UPDATE

RECOMMENDATION

That, on the recommendation of the Director of Environment, Fleet and Solid Waste, this report on the conclusion of the 2014-2018 Community Energy Action Plan activities **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

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

- Report to the August 13, 2018 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Status Update (Agenda Item #2.6)
- Report to the August 29, 2017 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Status Update (Agenda Item #11)
- Report to the June 8, 2016 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Update and Status (Agenda Item #10)
- Report to the May 5, 2015 Civic Works Committee (CWC) Meeting, Community Energy Action Plan – Update and Status (Agenda Item #13)
- Report to the July 21, 2014 Civic Works Committee (CWC) Meeting, Community Energy Action Plan (Agenda Item #16)

STRATEGIC PLAN 2015-2019

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

Strengthening Our Community

- Healthy, safe, and accessible city

Building a Sustainable City

- Convenient and connected mobility choices
- Strong and healthy environment

Growing our Economy

- Local, regional, and global innovation
- Strategic, collaborative partnerships

Leading in Public Service

- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE

The purpose of this report is to provide Committee and Council with a summary of the progress made implementing London's Community Energy Action Plan (CEAP) over the 2014-2018 period. This report, along with previous annual reports, will serve as input into the development of the next CEAP for 2019-2023.

CONTEXT

London's CEAP was approved by Council in July 2014. The CEAP laid out how we collectively move forward on energy conservation, energy efficiency, renewable energy, and other sustainable energy solutions that reduce greenhouse gas emissions. The CEAP focused on actions to be taken over the duration of previous Council term (2015-2018) to help support medium-term and longer-term greenhouse gas emission reduction goals for 2020 and 2030.

In total, 17 City-led strategies for the 2014-2018 period were identified and supported by 40 City-led actions to implement these strategies. This does not include the numerous actions taken in the community and by key energy stakeholders in London.

Appendix A contains further background, the guiding principles and goals of London's CEAP. Reporting annually on the status of actions was a key part of the overall program design.

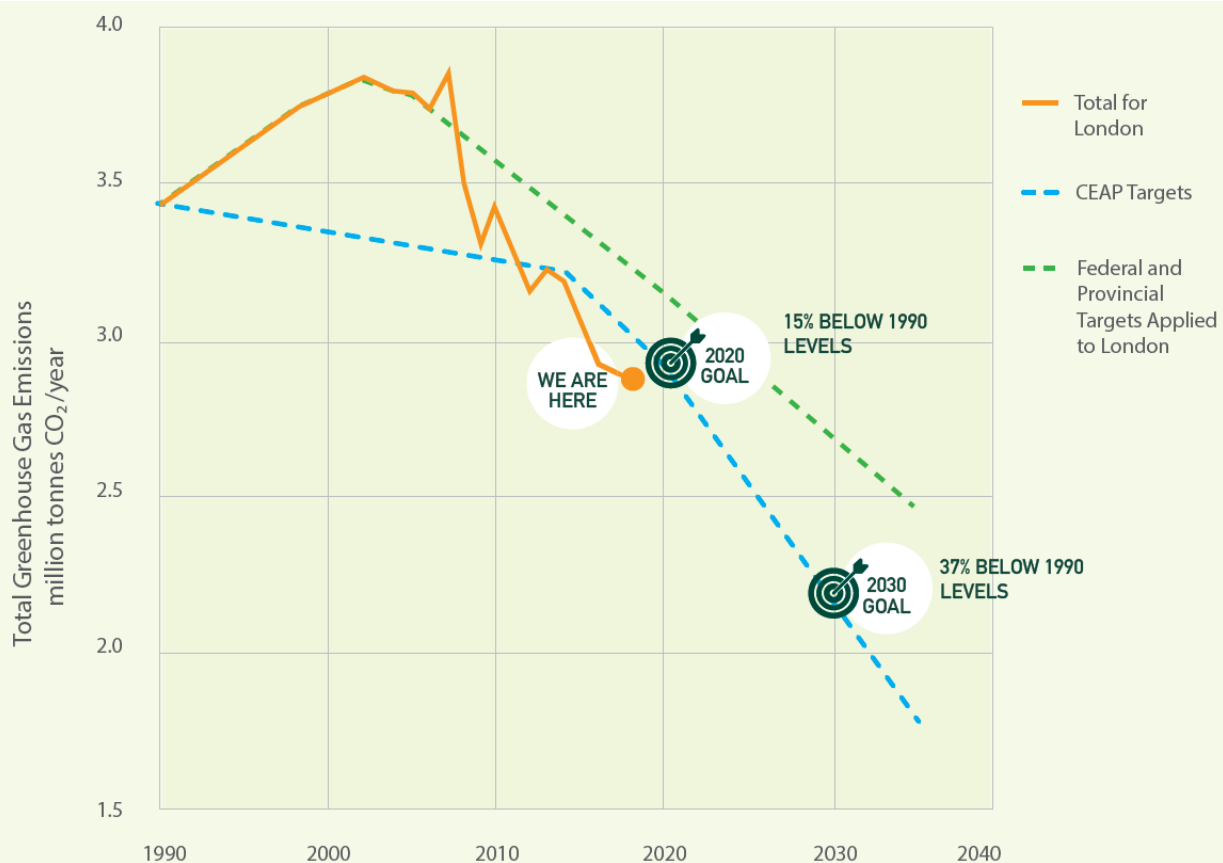
DISCUSSION

Why is the CEAP Important and How Have Londoners & London Businesses Benefitted?

The implementation of the CEAP had many benefits including:

- Environmental benefits - reducing energy use in London reduces Londoners' contribution to both smog-forming emissions and greenhouse gas (GHG) emissions. As noted in the 2017 Community Energy and Greenhouse Gas Inventory, and shown in Figure 1 below, London's greenhouse gas emissions in 2017 were 17 percent below 1990 levels, and greenhouse gas emissions per person were 34 percent lower than 1990 levels. Between 2014 and 2017 alone, total energy use dropped 6 percent and associated GHG emissions dropped 10 percent.

Figure 1: London's GHG Emissions Versus Federal and Provincial Reduction Targets



- Financial benefits - as noted in the 2017 Community Energy and Greenhouse Gas Inventory, almost \$1.5 billion was spent on energy in 2017, and almost 90 percent of this money leaves London. Every one percent reduction in energy use that Londoners and London businesses achieve keeps about \$13 million from leaving our local economy. Improvements in energy efficiency compared to 2010 levels of energy efficiency (on a per person basis and applied to activity in 2017) avoided \$150 million in energy costs had there been no improvements (i.e., Londoners and businesses would have spent \$150 million more in 2017 and a similar amount in 2018 on energy).
- Job creation benefits - investing in energy saving retrofits, local sustainable energy projects, and local energy production creates local jobs.
- Local synergies - ‘connecting the dots’ and capacity building between local initiatives and London’s major community stakeholders provides a strong framework for community and business collaboration.

How was CEAP Being Funded?

The CEAP drew upon existing resources across the Corporation performing work that aligned directly or indirectly with energy conservation and energy efficiency. In addition to City staff time, funding allocated to energy-related, community-led actions, awareness, and education ranged from \$25,000 to \$50,000 per year over the 2014-2018 period.

What Progress was Made?

All strategies and actions were started during the period 2014 to 2018. Over 80 percent of the strategies and City-led actions set out in 2014 were completed by the end of 2018, with significant progress made on the remaining items.

Final Status on the 2014-2018 CEAP’s 17 Key Strategies				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 strategies (0%)	0 strategies (0%)	1 strategy (6%)	2 strategies (12%)	14 strategies (82%)

Final Status on the 2014-2018 CEAP’s 40 City-led Actions				
Not Started	25 Percent Completion	50 Percent Completion	75 Percent Completion	Completed
0 actions (0%)	0 actions (0%)	0 action (0%)	8 actions (20%)	32 actions (80%)

Examples of recent City-led actions include:

- Completing the Green Municipal Fund study to examine barriers to “green development” and how to address the barriers in the context of a multi-use development;
- Completing the Local Energy Efficiency Partnerships (LEEP) for Renovators workshops for Natural Resources Canada and the London Home Builders’ Association;
- Partnering with the London Environmental Network to support the launch of Green Economy London, a target-based sustainability program for business that will be launched in May 2019. This included successfully obtaining start-up grants to support the organization in the initial years.

Other indicators of community-led progress for the 2014-2018 CEAP include:

- As of January 2019, there were 23 BOMA BEST Sustainable Buildings in London, up from four in 2013.
- As of April 2018, there was almost 16 megawatts of renewable power generation capacity (solar, biogas, and small hydro) in London, up from 2 megawatts in 2011.
- As of December 2018, there were almost 3,300 hybrid & electric vehicles registered in London, up from almost 1,500 in 2013.

Appendix B provides a complete list of the actions and a summary of the progress that was made.

All the annual update reports for the CEAP will serve as input into the development of the next CEAP, 2019-2023.

ACKNOWLEDGEMENTS

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Appendix A Background, Key Guiding Principles and Goals of London's 2014-2018 Community Energy Action Plan (CEAP)

Appendix B Summary of City-led 2014-2018 CEAP Strategies and Actions

Appendix A

Background, Key Guiding Principles and Goals of London's 2014-2018 Community Energy Action Plan (CEAP)

Background

One of the most critical roles that City staff played was to 'connect the dots' and develop collaborations between local initiatives and all of London's major community stakeholders, the activities they engage in, and the role that these stakeholders could play in London's 2014-2018 CEAP.

Connection with Other City of London Programs

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

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

Key Guiding Principles

London's 2014-2018 CEAP set out an action plan and program with the following key principles:

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

Goals of the 2014-2018 CEAP

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

1. Increase the local economic benefit of sustainable energy use through:
 - a. Cost savings from energy conservation and energy efficiency,
 - b. Revenue from local production of clean & green energy products, and

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

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

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

Appendix B

Summary of City-led 2014-2018 CEAP Strategies and Actions

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
POLICY SUPPORT FOR COMMUNITY ENERGY ACTION PLANNING						
1. Develop pilot programs to test these new policy tools and report back on their effectiveness.					✓	<p>Completed the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development in February 2019.</p> <p>The Centre for the Advancement of Low Carbon Implementation (CALCI) project, one of the FCM's Transition 2050 projects, launched in January 2019. This project will focus on:</p> <ul style="list-style-type: none"> • Home Energy Efficiency Retrofit Implementation • Green Development Standards Implementation; and • Corporate Implementation Teams
REPORTING AND EDUCATION ABOUT THE ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS OF ENERGY USE						
2. Work with community and neighbourhood associations to make use of neighbourhood energy maps and other energy information.					✓	<p>Energy maps have been updated up to 2015.</p> <p>Energy maps are a key engagement and planning tool for Active & Green Communities.</p>
3. Work with London Economic Development Corporation to encourage major London employers to report their energy performance to the public.					✓	<p>City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.</p>
SINGLE-FAMILY HOMES						
4. Work with the London & St. Thomas Real Estate Board and the London Home Builders' Association (LHBA) to promote Natural Resources Canada's new EnerGuide Rating System and other relevant building labelling programs on existing and new houses.			→			<p>Not completed.</p> <p>Ontario's proposed mandatory Home Energy Rating and Disclosure was cancelled in March 2018 due to lobbying efforts from the Ontario Real Estate Association.</p> <p>The OREA's position is a preference for voluntary use of energy performance labelling at the seller's discretion.</p>
5. Continue to work with the LHBA to promote wider use of energy-efficiency technologies and techniques in home construction and renovation.					✓	<p>Natural Resources Canada selected London to be the first community to participate in the "LEEP for Renovators" pilot project. Both the City and LHBA provided support for this project.</p> <p>The London region is home to two of Canada's certified for the new Net Zero Home Labelling Program – Sifton Properties and Doug Tarry Homes.</p>

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
MULTI-UNIT RESIDENTIAL BUILDINGS						
6. Work with leading property owners/managers and the London Property Management Association (LPMA) to educate local property owners on the use of energy performance benchmarking and other energy management practices for multi-unit residential buildings, for both the whole building and for marketing of leased space.					✓	Ontario introduced Energy and Water Reporting and Benchmarking (EWRB) regulations for large buildings in 2018. By July 1, 2019, this will apply to multi-unit residential buildings 100,000 ft ² and larger - 50% of London's multi-unit residential buildings. By July 1, 2020, this will apply to buildings 50,000 ft ² and larger - 65% of London's multi-unit residential buildings. Workshops promoting new Energy Star for New Multi-Family Buildings program being held in March 2019.
COMMERCIAL & INSTITUTIONAL BUILDINGS						
7. Encourage the creation of a business-led entity to foster sharing best environmental practices and reporting on progress in London's commercial building sector.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
8. Work with stakeholders to pilot the voluntary use of energy performance labelling and benchmarking tools in London, for both the whole building and for the marketing of leased space, to test and demonstrate the potential value of the various energy performance labelling and benchmarking activities available.					✓	Ontario mandatory energy benchmark reporting data for the Broader Public Sector is now available. Ontario's EWRB regulations came into effect in 2018 and, by 2020, will apply to about 50% of London's commercial buildings.
INDUSTRY AND MANUFACTURING						
9. Work with stakeholder on the ongoing promotion of energy management best practices, such as those provided by the Canadian Industry Program for Energy Conservation (CIPEC) and Natural Resources Canada's Office of Energy Efficiency.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
10. Encourage the creation of a business-led entity to foster sharing best environmental practices and reporting on progress in London's industrial and manufacturing sector.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
STORES, RESTAURANTS, & OTHER SMALL BUSINESSES						
11. Continue to work with local business associations, leading businesses, the Chamber of Commerce and local utility conservation and demand management staff on energy and environmental initiatives					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
LOCAL ENERGY PRODUCTION AND CO-GENERATION OF HEAT & POWER						
12. Promote and encourage the expanded use of cogeneration of heat & power for both district energy applications as well as net-metered building/facility applications.					✓	The London Plan and the Downtown Master Plan include references to the existing downtown district energy system. London Hydro is a participant in QUEST Ontario's Combined Heat & Power (CHP) Consortium and is exploring CHP in net-metered building/facility applications.
13. Investigate the feasibility of utilizing source-separated organics as a feedstock for the production of bioenergy products (biogas, biomass, biofuels) as part of London's waste diversion strategy, as outlined in Road Map 2.0 - The Road to Increased Resource Recovery and Zero Waste.					✓	City staff worked with the Biogas Association and Union Gas on a feasibility study for producing renewable natural gas (RNG) from the organics component of municipal solid waste as part of a larger project dealing with compressed natural gas (CNG) vehicles.
VEHICLES AND THE TRANSPORTATION SYSTEM						
14. Develop and Implement the Comprehensive Active Transportation and Transportation Demand Management Action Plan in support of the proposed Complete Streets Mobility Plan.				→		Partially completed. City has partnered with SustainMobility on the three year CommuteOntario project, funded by the Ontario Trillium Foundation. The project will test new commuter programs and incentives. Planning for a downtown transportation management association is underway.
15. Provide tools and resources to help Londoners assess the cost/benefit of replacing older vehicles with more-efficient new vehicles, vehicle downsizing, and eco-driving techniques.					✓	Provincial funding was used to cover a portion of the costs for the MyCarma London fuel efficient vehicle engagement pilot program, which ended in May 2017 the results of which are being reviewed.
16. Provide tools and resources to assist local fleet owners/operators in determining the lifecycle cost/benefit of low/no emission vehicles and other fleet greening practices.				→		Partially completed. A workshop on commercial compressed natural gas vehicles was held back in 2014. City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.

17 Strategies	Progress					Status and Comments
	0%	25%	50%	75%	100%	
17. Work with Union Gas to promote the use of compressed natural gas (CNG) and renewable natural gas (RNG, purified biogas) as a substitute for diesel fuel for heavy-duty vehicles in London.					✓	City of London will be using Union Gas's new CNG fuelling station at the Flying J Truck Stop for future City CNG waste collection trucks. RNG will be a future consideration at this location.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	

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

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
5. Study the implementation of Local Improvement Charges (LICs) for residential and commercial building energy and water retrofits in other jurisdictions, such as the pilot program implementation of the Home Energy Loan Program launched in the City of Toronto in 2014.					✓	City staff provided support for the Clean Air Partnership's Centre for the Advancement of Low Carbon Implementation (CALCI) project, one of the FCM's Transition 2050 projects, launched in January 2019. This project will include a focus on home energy efficiency retrofit implementation. The use of LICs in Ontario for energy efficiency has had limited success.
6. Work with the development industry on an integrated community energy solutions pilot project, of sufficient size, to evaluate current practices (municipal and developer); to identify potential barriers in new developments, and to begin the process of overcoming these barriers for the future development in London. Alternatively, carry out a detailed analysis of a comparable project(s) in another Ontario or Canadian jurisdiction.					✓	Completed the FCM Green Municipal Fund funded Feasibility Study: Municipal Tools for Catalyzing Net-Zero Energy Development. This is a multi-municipality project with the City of Kingston, City of Kitchener, and City of Waterloo to study "green development" policies.
7. Advocate for increased support from federal and provincial governments for undertaking community energy planning at the municipal level of government.					✓	City of London staff will continue to participate in and support the activities undertaken by Quality Urban Energy Systems for Tomorrow (QUEST).
8. Participate as an observer the Ontario Power Authority's (OPA's) regional electricity planning activities for the London area in 2015.					✓	An Integrated Regional Resource Plan (IRRP) was released for the Greater London sub-region in January 2017.
REPORTING AND EDUCATION ABOUT THE ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS OF ENERGY USE						
9. Identify "influencers" in the community, such as individuals in businesses, organizations, neighbourhoods, and schools at all levels of education and develop strategies to enlist and engage them.					✓	City staff participated on a Steering Committee that established the London Environmental Network (LEN) which includes a number of groups that focus on energy. City staff are identifying influencers at the community level through Active & Green Communities (see Action 10 below). City staff have been providing financial and in-kind support to LEN's efforts to establish Green Economy London, a target-based sustainability program being launched in 2019.

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

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
SINGLE-FAMILY HOMES						
15. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities. Peer benchmarking of water consumption is available on the London Hydro website.
16. Work with Union Gas to identify priority neighbourhoods (i.e., “red zones” on energy map) for implementation of their new Home Reno Rebate program and Helping Homes Weatherization program, and assist in the promotion of these programs.					✓	Updated energy maps have been shared with Union Gas staff. Through Active & Green Communities, energy mapping data is being used in participating to identify parts of that neighbourhood to target promotion of Union Gas programs will promote Union Gas programs. (see Action 10).
17. Work with the London Home Builders’ Association (LHBA) to: Explore the potential for a “LEEP 3.0” technology evaluation project Evaluate Toronto’s Home Energy Loan Program (LIC pilot) Develop and deliver a draftproofing & insulation demonstration project					✓	Natural Resources Canada selected London to be the first community to participate in the “LEEP for Renovators” pilot project. Both the City and LHBA provided support for this project. NRCan, LHBA, and the City are working together to promote deeper energy retrofits to Londoners through the Home Green Home displays at major events starting in 2019.
18. Work with London Hydro and Union Gas to explore options for providing peer comparison (social benchmarking) information on household energy use to encourage conservation.					✓	Worked with Project Neutral to improve and simplify their carbon footprint calculator based on feedback from trials. This new version was released in December 2018. (see Action 10) The Project Neutral calculator and energy maps were incorporated into the Active & Green Home Check-up pilot.
19. Use energy mapping resources to develop methodology for measuring the average energy efficiency (energy used per square meter floor area) of new single-family homes.					✓	Municipal Property Assessment Corporation (MPAC) property data (which includes data on building type, age, and size) has been matched with utility data to produce residential energy efficiency (GJ/m ² floor area) maps. (see Action 13).

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
20. Continue working with LHBA to promote the voluntary use of the next generation of the ENERGY STAR for New Homes initiative, as well as broader “green home” labels (e.g., GreenHouse™ Certified Construction and LEED® Canada for Homes)				→		Partially completed. The LHBA’s Technical Committee monitors regulations and processes of a technical, green or environmental nature and attends OHBA EnerQuality Technical Committee meetings. The London region is home to two of Canada’s certified for the new Net Zero Home Labelling Program – Sifton Properties and Doug Tarry Homes.
MULTI-UNIT RESIDENTIAL BUILDINGS						
21. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities.
22. Use energy mapping resources to develop methodology for ongoing measurement of the city-wide average energy efficiency (energy used per square meter floor area – all commodities) of multi-unit residential buildings.				→		Partially Completed. Working with Fanshawe College GIS program faculty and students on creating additional map tools, including multi-unit residential buildings. Results are expected in 2019. (see Action 13) Ontario is introducing its EWRB regulatory requirement for large buildings in 2018, which will provide an alternative method to measure this.
23. Determine the share of London’s multi-unit residential properties participating in Natural Resources Canada’s ENERGY STAR Portfolio Manager and other energy performance labelling and benchmarking programs.					✓	Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of December 31, 2016. A minimum of 20 multi-unit residential buildings in London need to participate in order to be disclosed. This threshold has not been reached to date.
COMMERCIAL & INSTITUTIONAL BUILDINGS						
24. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	Water Demand Management staff have been working closely with London Hydro staff on a range of conservation activities.
25. Work with the stakeholders (e.g., London Chapter of the International Facility Management Association, BOMA Toronto) to promote and share existing energy management best practices (e.g., employee awareness & training, monitoring & reporting, etc.) within London’s industrial, commercial, and institutional sector.					✓	Commercial building energy workshop was held in November 2014. City staff have supported LEN’s efforts to establish Green Economy London, a target-based sustainability program being launched in 2019 that will include members from this sector. (see Action 29 below). As of January 2019, there were 23 BOMABEST certified buildings in London, up from four in 2013 and 22 in 2017.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
26. Determine the share of London's commercial & institutional property owners voluntarily participating in Natural Resources Canada's ENERGY STAR Portfolio Manager and other energy performance labelling and benchmarking programs.					✓	Natural Resources Canada has provided the City of London with Portfolio Manager participant data as of May 2018. In London, 300 buildings, with a total floor area of 2,750,000 m ² , have been assessed as of that date. This represents 31 percent of total commercial and institutional floor area in London.
27. Use energy mapping resources to develop the method for ongoing measuring the average energy efficiency (energy used per square meter floor area) of existing and new commercial & institutional buildings on an annual basis.				→		Partially completed. Working with Fanshawe College GIS program faculty and students on creating additional map tools, including commercial buildings. Expected in 2019. (see Action 13) Ontario mandatory energy benchmark reporting data for the Broader Public Sector buildings is now available. Ontario introduced its EWRB reporting requirement for large buildings in 2018.
INDUSTRY AND MANUFACTURING						
28. Determine the share of London's industrial and manufacturing employers (by percentage of employment) that have documented energy management plans, programs, or systems in place.					✓	In terms of "publicly-stated" commitments to environmental/energy, action based on LEDC's list of London employers and a review of their websites: <ul style="list-style-type: none"> Employers with public commitments to environmental/energy management make up more than 50% of London's entire workforce Out of LEDC's Top 100, 53 are employers with public commitments
29. Work with the stakeholders to promote and share existing energy management best practices within London's industrial, commercial, and institutional sector.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.
30. Continue to work with London Hydro and Union Gas to explore options for combining water conservation with energy conservation.					✓	This activity is being led by the Water Demand Management program.
STORES, RESTAURANTS, & OTHER SMALL BUSINESSES						
31. Continue to work with local business associations, leading businesses, the Chamber of Commerce and local utility conservation and demand management staff on energy and environmental initiatives.					✓	City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019. Small businesses will be one of the target markets for this program. (see Action 29).

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
LOCAL ENERGY PRODUCTION AND CO-GENERATION OF HEAT & POWER						
32. Work with London District Energy to prepare an information package that can be used by the City's Development Approvals staff to encourage new development in areas served by London District Energy to connect to the system.				→		Partially completed. Initial meetings have been held with the City's Development Approvals area and London District Energy staff, with agreement in principle to make these materials available.
33. Work with London District Energy to prepare an information package for use by local architects and developers involved with projects in areas served by London District Energy.				→		Partially completed. The role of the existing district energy system has been incorporated in to the London Plan and draft Downtown Master Plan (see Action 3).
34. Work with London Hydro and the OPA to determine a realistic estimate of and timeline for reaching the maximum potential for cogeneration and renewable electricity-generating capacity in London					✓	An Integrated Regional Resource Plan (IRRP) was released by the IESO for the Greater London sub-region in January 2017. The IESO notes that anticipated future power needs are well suited to community driven solutions, including local distributed energy resource projects (such as small scale CHP, solar and/or storage technologies).
VEHICLES AND THE TRANSPORTATION SYSTEM						
35. Carry out the 2030 Transportation Master Plan, as approved by London Municipal Council, for improving London's transportation network to increase walking, cycling, carpooling and use of public transit.				→		Partially completed. Developing the business case for a bike share program in London for presentation in 2019. Downtown bike parking will be further examined and expanded, where possible in 2019 and/or 2020 using Federal Public Transit Infrastructure Fund and City funding. Downtown transportation management association to be developed in 2019.
36. Carry out the Short-Term Implementation Strategy for active transportation and Transportation Demand Management.					✓	City has partnered with SustainMobility on the three year CommuteOntario project, funded by the Ontario Trillium Foundation, to test new commuter programs and incentives on a broader scale.
37. Obtain statistics on the number of high-efficiency vehicles (e.g., hybrids, plug-in hybrids, electric vehicles, diesel, and compressed natural gas) owned in London.					✓	Vehicle ownership statistics have been obtained for 2010-2014, 2016, 2017, and 2018 from IHS Markit.

40 Actions	Progress					Status and Comments
	0%	25%	50%	75%	100%	
38. Work with Union Gas to encourage major local fleet operators to adopt the use of compressed natural gas (CNG) vehicles.					✓	City of London will be using Union Gas's new CNG fuelling station at the Flying J Truck Stop for future City CNG waste collection trucks. RNG will be a future consideration at this location.
39. Work with Union Gas and the Biogas Association on a preliminary feasibility study for using "green bin" source-separated organics to produce renewable natural gas (RNG) for use in local CNG vehicles.					✓	Feasibility study completed. City staff have submitted an expression of interest to FortisBC (the gas utility in British Columbia) for supplying RNG. Further information on this program is expected in 2019.
40. Provide tools and resources to help Londoners assess the cost/benefit of replacing older vehicles with more-efficient new vehicles, vehicle downsizing, and eco-driving techniques. Similarly, provide tools and resources to assist local fleet owners/operators in determining the lifecycle cost/benefit of low/no emission vehicles and other fleet greening practices.				→		Partially completed. MEP Implementation funding was used to cover a portion of the costs for the MyCarma London fuel efficient vehicle engagement pilot program, which ended in May 2017 the results of which are being reviewed. City provided support to LEN's efforts to establish Green Economy London, a target-based sustainability program for businesses to be launched in 2019.

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	JAY STANFORD, M.A., M.P.A. DIRECTOR, ENVIRONMENT, FLEET & SOLID WASTE
SUBJECT:	DEVELOPMENT OF THE NEXT 2019-2023 COMMUNITY ENERGY ACTION PLAN

RECOMMENDATION

That, on the recommendation of the Director – Environment, Fleet & Solid Waste, the next steps for the development of the 2019-2023 Community Energy Action Plan, as presented in this report, **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

This subject area includes numerous relevant reports at www.london.ca under City Hall (Meetings) including the final update to the 2014-2018 Community Energy Action Plan included in this Civic Works Committee Agenda.

STRATEGIC PLAN 2015-2019 AND DEVELOPMENT OF COUNCIL'S 2019-2023 STRATEGIC PLAN

Municipal Council continues to recognize the importance of climate change mitigation, climate change adaptation, sustainable energy use, related environmental issues and the need for a more sustainable and resilient city in the development of its 2019-2023 - Strategic Plan for the City of London. Specifically, London's efforts in both climate change mitigation and adaptation can address all four Areas of Focus, at one level or another:

- Strengthening Our Community
- Building a Sustainable City
- Growing our Economy
- Leading in Public Service

BACKGROUND

PURPOSE:

The purpose of this report is to provide Committee and Council with an overview of the next steps to develop the 2019-2023 Community Energy Action Plan (CEAP).

CONTEXT:

The 2014-2018 Community Energy Action Plan was approved by Council in July 2014. This was the first comprehensive community energy action plan created after several years of community engagement and input received from other engagements:

- Rethink Energy London, January 2010 through to 2012
- Rethink London launched in 2012

The Guiding Principles of the 2014-2018 CEAP included:

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

The CEAP focused on actions to be undertaken during the previous Council term (2015-2018). The overall goals were to:

1. Increase the local economic benefit of sustainable energy use through:
 - a. Cost savings from energy conservation and energy efficiency,
 - b. Revenue from local production of clean & green energy products, and
 - c. Job creation associated with product and service providers engaged in these activities.
2. Reduce the environmental impact associated with energy use, through the use of greenhouse gas emission (GHG) reduction targets consistent with the Province of Ontario's former targets, namely:
 - a. 15 percent reduction from 1990 levels by 2020,
 - b. 37 percent reduction from 1990 levels by 2030, and
 - c. 80 percent reduction from 1990 levels by 2050.

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

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

Progress on the 2014-2018 CEAP was reported annually, with the final update report provided to Civic Works Committee on this meeting Agenda (April 2, 2019).

DISCUSSION

Background to Community Energy Planning

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

There are two primary types of responses to address climate change:

- Mitigation: mitigating future impacts through reductions in emissions of greenhouse gases (GHG) such as carbon dioxide, methane, and nitrous oxides, primarily as a result of fossil fuel energy use (e.g., fuel for personal vehicles, natural gas to heat homes); and

- Adaptation: adapting infrastructure, homes, buildings, landscapes, etc. to better withstand current and future impacts of more frequent severe weather events that are created from a climate that is “wetter, warmer, and wilder”.

There are also actions that can be taken that provide benefits to both climate change mitigation and adaptation, such as “smart grid” power generation and storage technologies, combined heat and power systems, green roofs, and urban forestry.

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

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

The development, implementation and advancement of municipal/community energy plans is strongly supported by the Association of Municipalities of Ontario (AMO) and the Federation of Canadian Municipalities (FCM). Municipal/community energy plans were also a key component of Ontario’s former Climate Change Action Plan.

In December 2018, the current government of Ontario made the importance of community energy planning very clear in its proposed *Preserving and Protecting our Environment for Future Generations – A Made-in-Ontario Plan*:

Addressing Climate Change

DOING OUR PART: Government Leadership

Empower effective leadership on climate change:

- *Work with municipalities to develop climate and energy plans and initiatives to support building climate resilience and transformation to the low-carbon future.*
- *Support the efforts of Indigenous communities to integrate climate action into local plans and initiatives for community power, economic development, health and sustainability.*
- *Encourage local leadership by forming stronger partnerships and sharing best practices with community groups and business associations.*

City staff are playing a leadership role within Quality Urban Energy Systems of Tomorrow (QUEST) Canada, a leading organization for community energy planning. QUEST estimates that over 200 communities in Canada have community energy plans, and more than 400 communities - which collectively represent more than 50 percent of Canada’s population - are working on community energy initiatives.

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

Foundation from 2014-2018 CEAP

During the 2014-2018 CEAP numerous workshops, presentations, energy efficient installations, behaviour changing solutions, energy conservation technologies, apps, festivals, reports, videos, celebrations, etc. occurred across London. This demonstrates the desire to take action to reduce energy consumption, live in a more sustainable city, share stories, and learn about more opportunities.

Reflecting back on the successes and challenges of the first 4+ years provides a good foundation to create actions for the next time period. Contained in Appendix A is a brief City staff summary of “what worked”, “what didn’t work” and “what needs to change”.

Key City Service Areas, Activities and Strategies that Support the CEAP

The 2019-2023 CEAP will be connected to many City of London programs and initiatives across several Services Areas including:

- Environmental & Engineering Services
- City Planning
- Corporate Services
- Development & Compliance
- Housing & Social Services
- Neighbourhood, Children & Fire Services
- Parks & Recreation

It is worth noting that within City Planning, a number of resources have been re-aligned and strengthened in an area called Long Range Planning and Sustainability. This will add value to planning for both immediate sustainable energy actions as well as for the planning and design that is required to ensure the community is ready to embrace change in the future.

In addition to the upcoming approval of the final Council Strategic Plan for the period 2019-2023 (expected in April 2019), important strategies, plans and programs that contribute to CEAP include, but are not limited to (in alphabetical order):

- Active transportation and transportation demand management activities
- Active & Green Communities program
- Climate Change/Severe Weather Adaptation Strategy for built infrastructure
- Corporate Asset Management Plan
- Corporate Energy Conservation & Demand Management (CDM) Plan including Green Fleet initiatives
- Cycling Master Plan
- The London Plan (including sustainability, resiliency strategies, completion of remaining Green Strategies, as well as Community Improvement Plans for Downtown, Old East, and SoHo)
- NeighbourGood London: London Strengthening Neighbourhoods Strategy
- Regeneration Plan for community housing, including the Affordable Housing Development Strategy and Affordable Housing Community Improvement Plan
- Smart City Strategy
- Smart Moves Transportation Master Plan (including higher-order transit projects and related initiatives)
- Stormwater and watershed management programs (e.g., green roofs, Flooding Matters program)
- Urban Forest Strategy
- Waste management (including the Waste Disposal Strategy, the London Waste to Resources Innovation Centre, and the 60% Waste Diversion Action Plan)
- Water conservation and efficiency programs

It is important to recognize that the above strategies, plans and programs are continuing to produce positive results towards the recently completed CEAP and during the development of the next CEAP (see below). There is no gap in action.

Next Steps for Developing the 2019-2023 CEAP

Over the next ten months, City staff will undertake the following:

1. Complete the review of existing community energy and/or climate change action plans in other comparable communities.
2. Work with a few third-party organizations (e.g., Clean Air Partnership, QUEST Canada, CDP Cities) to carry out an independent review and/or discussion of the previous 2014-2018 CEAP to identify gaps with current best practices.

3. Talk to London’s key energy business and institutional stakeholders (e.g., energy suppliers, energy users) to understand and confirm how best to work with them on future energy and/or climate change actions, specifically:
 - a. How the City can help them with their actions,
 - b. How they can help the City with our actions, and
 - c. How collaborative work also helps other Londoners and London employers to take action.

4. Talk with a number of community leaders (in energy efficiency and sustainable energy actions) to understand and confirm how to best engage, inspire and/or influence the community on future energy and/or climate change actions, specifically:
 - a. How the City can help encourage more actions, and
 - b. How the community can help the City with our actions.

5. Finalize the elements of a broader community engagement plan that captures the learnings from #3 and #4 above.

Activity	Timeframe
Review of existing community energy and/or climate change action plans	April – May
Third-party independent review and/or discussion of the previous 2014-2018 CEAP	April - July
Discussions with London’s key energy stakeholders and community leaders	April - September
Launch a broader community engagement plan	September - November
Develop Draft 2019-2023 CEAP	October - December
Submit Draft 2019-2023 CEAP to Civic Works Committee	January 2020

PREPARED BY:	PREPARED BY:
PATRICK DONNELLY, M.Sc., RPP URBAN WATERSHED PROGRAM MANAGER	JAMIE SKIMMING, P.ENG. MANAGER, AIR QUALITY
PREPARED AND RECOMMENDED BY:	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 City Staff Perspectives on the 2014-2018 CEAP

- c Anna Lisa Barbon, Managing Director, Corporate Services and City Treasurer, Chief Financial Officer
George Kotsifas, Managing Director, Development & Compliance Services & Chief Building Official
Sandra Datars Bere, Managing Director - Housing, Social Services and Dearness Home
Lynne Livingston, Managing Director, Neighbourhood, Children & Fire Services
Scott Stafford, Managing Director, Parks & Recreation
John Fleming, Managing Director, City Planning and City Planner

APPENDIX A

CITY STAFF PERSPECTIVES ON THE 2014-2018 CEAP

City staff perspectives on the outcome of the 2014-2018 CEAP have been structured around answering these three questions:

- What worked?
- What didn't work?
- What needs to change?

What Worked?

City staff found that the most successful actions undertaken were those where there was a specific project or program around which people from many stakeholder groups with a shared interest could rally around. Examples of these include:

- The establishment of the London Environmental Network to help build local capacity for community-led environmental projects, which involved people initially from ReForest London and the Thames Talbot Land Trust;
- The establishment of Green Economy London to will help foster target-based sustainability programs for local businesses, which has involved many people from local organizations & businesses such as London Environmental Network, Labatt Brewery, Libro Financial, Western University, and MTE Consulting;
- The delivery of London Energy Efficiency Partnership (LEEP) for Renovators workshops to help encourage local renovators undertake deep energy retrofits of older homes, which involves participation from the London Home Builders' Association (LHBA), LHBA members, and Natural Resources Canada;
- The deployment of curbside electric vehicle charging stations, which involved participation from London Hydro, FLO, and City of London Parking Services;
- The deployment of a compressed natural gas fuelling station, which involved participation from Union Gas and City of London Fleet Services; and
- The development and delivery of the Active & Green Home Visit pilot project, which involved participation from Green Energy London and a number of Active & Green Communities.

What Didn't Work?

The 2014-2018 CEAP never attained the status of a document which other stakeholders rallied around, or made references to within their own plans. However, the subject areas of CEAP; energy conservation, sustainable energy, reducing GHG generations, etc. were widely known.

In comparison, The London Plan (Official Plan) document enjoys a high level of recognition amongst Londoners as a whole, with The London Plan often being referenced by London stakeholders. This is not surprising given the significant amount of effort and resources dedicated to engaging Londoners in the development of The London Plan.

It was also challenging to obtain and document information on the actions that many Londoners and key energy stakeholders have taken, particularly when there was no strong incentive to share this information. The upcoming launch of Green Economy London will provide a new forum through which London's employers can the share their stories. Web-based story-telling platforms such as CityGreen Stories will be reviewed.

What Needs to Change?

As part of updating and expanding the reach of CEAP for 2019-2023, there needs to be consideration of an improved fit with respect to higher-order documents such as The London Plan and the 2019-2023 Strategic Plan. Both of these documents outline at a high level the community aspirations related to climate change mitigation and adaptation for the longer term (in the case of The London Plan) and the near term (for the 2019-2023 Strategic Plan).

The role for the 2019-2023 CEAP should be one of a “work plan” that outlines in more detail how those aspirations related to the role of community energy use in climate change mitigation will be addressed and met over this next term of council. This takes advantage of the high level of recognition that The London Plan enjoys within the community, which then alleviates the need to build a separate “brand” for the 2019-2023 CEAP itself.

In the delivery of the 2019-2023 CEAP, there will be some organizations that will play a more significant role than just that of a stakeholder. These organizations would be partners with the City on the delivery of local programs and projects. Examples of these potential partners include, but not limited to, London Hydro, Union Gas, the London Home Builders’ Association, London Environmental Network, Green Economy London, Fanshawe College, and Western University.

DEFERRED MATTERS

**CIVIC WORKS COMMITTEE
(as of March 25, 2019)**

Item No.	File No.	Subject	Request Date	Requested/ Expected Reply Date	Person Responsible	Status
1.	75.	<p><u>Options for Increased Recycling in the Downtown Core</u> 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:</p> <p>b) the Civic Administration BE DIRECTED to report back to the Civic Works Committee in May 2017 with respect to:</p> <ul style="list-style-type: none"> 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	3rd Quarter 2019	K. Scherr J. Stanford	
2.	76.	<p><u>Rapid Transit Corridor Traffic Flow</u> 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.</p>	Dec 12/16	2nd Quarter 2019	K. Scherr J. Ramsay	

3.	78.	<p><u>Garbage and Recycling Collection and Next Steps</u> 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.</p>	Jan 10/17	2 nd Quarter 2019	K. Scherr J. Stanford	2 nd Quarter 2019
4.	91.	<p><u>Warranted Sidewalk Program</u> 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.</p>	Sept 26/17	2 nd Quarter 2019	D. MacRae	
5.	93.	<p><u>Public Notification Policy for Construction Projects</u> 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.</p>	Nov 21/17	3 rd Quarter 2019	U. DeCandido	

6.	94.	<p><u>Report on Private Works Impacting the Transportation Network</u></p> <p>b) report back to the Civic Works Committee, by the end of March 2018, on:</p> <ul style="list-style-type: none"> 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 iv) any other improvements identified through the review resources required to implement these improvements; and 	Dec 4/17	3rd Quarter 2018	G. Kotsifas	George to provide new date
7.	99.	<p><u>Pedestrian Sidewalk – Pack Road and Colonel Talbot Road</u></p> <p>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.</p>	Feb. 6, 2018	2nd Quarter 2019	D. MacRae S. Maguire	
8.	105	<p><u>Environmental Assessment</u></p> <p>That the Managing Director, Environmental and Engineering Services & City Engineer BE REQUESTED to report on the outstanding items that are not addressed during the Environmental Assessment response be followed up through the detailed design phase in its report to the Civic Works Committee.</p>	July 25, 2018	2nd Quarter 2019	S. Mathers P. Yeoman	

Transportation Advisory Committee

Report

3rd Meeting of the Transportation Advisory Committee
March 26, 2019
Committee Room #4

Attendance PRESENT: D. Foster (Chair), S. Brooks, D. Doroshenko, T. Khan, P. Moore, L. Norman and S. Wraight and J. Bunn (Committee Secretary)

ABSENT: G. Bikas and H. Moussa

ALSO PRESENT: M. Elmadhoon, Sgt. S. Harding, P. Kavcic, A. Miller, M. Ridley and S. Smith

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

1. Call to Order

1.1 Disclosures of Pecuniary Interest

That it BE NOTED that no pecuniary interests were disclosed.

2. Scheduled Items

2.1 Byron South Neighbourhood Sidewalk Connectivity Plan

That it BE NOTED that the attached presentation from S. Smith, Engineering Intern, with respect to the Byron South Neighbourhood Sidewalk Connectivity Plan, was received.

3. Consent

3.1 2nd Report of the Transportation Advisory Committee

That it BE NOTED that the 2nd Report of the Transportation Advisory Committee, from its meeting held on February 26, 2019, was received.

3.2 Municipal Council Resolution - Annual New Street Light Local Improvement Program

That it BE NOTED that the Municipal Council resolution, from its meeting held on March 5, 2019, with respect to an annual New Street Light Local Improvement Program, was received.

3.3 Letter of Resignation - J. Scarterfield

That it BE NOTED that the letter of resignation from the Transportation Advisory Committee, dated February 27, 2019, from J. Scarterfield, was received.

3.4 Vision Zero Update

That it BE NOTED that the communication from J. Scarterfield, Middlesex-London Health Unit, with respect to an update on the Vision Zero London program, was received.

4. Sub-Committees and Working Groups

None.

5. Items for Discussion

5.1 2019 TAC Work Plan

That the attached 2019 Work Plan for the Transportation Advisory Committee BE FORWARDED to the Civic Works Committee for consideration.

5.2 TAC Terms of Reference

That it BE NOTED that the following items, with respect to the Transportation Advisory Committee Terms of Reference and the Advisory Committee Review, were received:

- a verbal update as well as two communications from B. Westlake-Power, Deputy City Clerk;
- the Transportation Advisory Committee Terms of Reference document; and,
- a staff report, dated March 19, 2019, from C. Saunders, City Clerk.

5.3 Community Safety and Crime Prevention Week Update

That it be noted that a verbal update from L. Norman, with respect to the Community Safety and Crime Prevention Week, was received.

6. Deferred Matters/Additional Business

6.1 (ADDED) Letter of Resignation - G. Debbert

That it BE NOTED that the letter of resignation from the Transportation Advisory Committee, dated March 20, 2019, from G. Debbert, was received.

6.2 (ADDED) Letter of Resignation - A. Stratton

That it BE NOTED that the letter of resignation from the Transportation Advisory Committee, dated March 24, 2019, from A. Stratton, was received.

7. Adjournment

The meeting adjourned at 1:47 PM.



Purpose of Meeting

Byron South Neighbourhood Sidewalk Connectivity Plan

- Design was completed for the sidewalk plan around Byron Southwood Public School.
- Meeting today is to present which side of the street the sidewalks will be installed.

Transportation Advisory Committee – March 26th, 2019



2



Next Steps

- Letters have been sent out to notify the impacted residents, indicating which side of the street will have the sidewalks installed.
- Construction is planned for Summer of 2019 when Byron Southwood School is not in session.

Questions?

5



6



**TRANSPORTATION ADVISORY COMMITTEE
2019 WORK PLAN
(as at March 2019)**

Updated: March 15, 2019

	Project/Initiative	Background	Lead/ Responsible	Proposed Timeline	Proposed Budget	Link to Strategic Plan	Status
TAC 18.5	Connected And Autonomous Vehicles (CAV)	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 London. It is time for policymakers and transportation professionals to proactively evaluate, assess and plan for the onset of vehicle automation.	City Staff	Q3-2020		Building A Sustainable City 1A, 2B, 5B Growing Our Economy 3A, 4B, 4C	Initial Presentation received June 26 th . CAVWG has been established by CWC to develop a strategy by mid-2020. RTIWG hosted an expert panel on Feb 21. Invitation sent to TAC.
TAC 18.8	TDM Best Practice Research – Land Use Policies	Considering the TAC specific interest in Land Use Policies, the Committee can work with City staff to research and document best practices from other North American municipalities that integrate land use decisions with TDM. Specifically, municipalities where land use encourages transit, vanpooling, carpooling and active transportation (such as walking and cycling), as well as infrastructure to encourage telework.	City Staff	Ongoing		Strengthening Our Community Building A Sustainable City Growing Our Economy	Lowest priority of the 3 TDM items submitted in 2018. Ties into implementations of Rapid Transit, Cycling Master Plan & Complete Streets Manual projects.
TAC 18.10	Transportation Intelligent Mobility Management System (TIMMS)	Project includes upgrading current traffic signal communications systems, development of a new Transportation Management Centre, adaptive “smart” traffic signals along select corridors, enhanced transit signal priority, travel time monitoring, incident/event identification and management and real-time information. The TIMMS project would be implemented over the next decade or so with major upgrade work likely occurring in 2019.	City Staff	Q1-2020		Strengthening Our Community 5E, 5F Building A Sustainable City 1C, 2A, 2C Leading in Public Service 5B, 5D	TAC to provide feedback on the TIMMS policy, scope of work and implementation plan.
TAC 18.11	Transportation Management Association (TMA)	The City has received funding from the Public Transit Infrastructure Fund (PTIF) to develop a feasibility study and business case for developing a Downtown Transportation Management Association (TMA) which would be a 1 st for London. TAC will be consulted for recommendations for invitees for a TDM Primer session and input on governance model and geographic area for TMA.	City Staff	Ongoing		Strengthening Our Community Building A Sustainable City Growing Our Economy	TDM Primer is tied to Rapid Transit. Other consultations will be ongoing.

	Project/Initiative	Background	Lead/ Responsible	Proposed Timeline	Proposed Budget	Link to Strategic Plan	Status
TAC 18.12	Business Travel Wise Program Expansion	City Staff plans to engage local employers to participate in the program which encourages commuting Londoners to use options other than driving alone through programs and incentives. The Commute Ontario project will include actions such as: expanded carpooling; ActiveSwitch walking and cycling rewards program; Emergency Ride Home program; ongoing campaigns, incentives and rewards and - tracking tools to measure ROI.	City Staff	Ongoing		Strengthening Our Community Building A Sustainable City Growing Our Economy	Update: Commute Ontario has launched. Staff request TAC members to suggest companies to participate in the program or Allison can provide information to forward to contacts.
TAC18.16	TAC Terms of Reference	In preparation for the City Clerk pending Review of Advisory Committees, a Working Group lead by tariq Khan has been established to review the TAC Terms of Reference.	Tariq Khan	Q1-2019		Leading in Public Service	Draft to be complete for circulation and comments prior to March TAC.
TAC 19.1	2019 TAC Work Plan	Work Plan Work Group to review 2018 Carry-Over Items and suggestions by City Staff and TAC Members for the 2019 WorkPlan.	Tariq Khan Dan Foster	Q1-2019		TAC Terms of Reference - Planning	Final Draft circulated March 6 th and there were no additional comments. Will table at the March 2019 TAC meeting.
TAC 19.2	Sidewalk Warranted Program	The 2019 Sidewalk Program is an ongoing annual program responding to resident requests to improve walkability and accessibility in their neighbourhoods through the installation of sidewalks	City Staff	Q1/2-2019		Building A Sustainable City	Staff to present to TAC the Byron South Sidewalk Connectivity Plan.
TAC 19.3	Highbury Ave South Rehabilitation	The City is planning some rehabilitation work on Highbury Avenue S from Power Street to near Highway 401. This section of Highbury includes the Wenige Bridge and a section of concrete roadway which is over 40 years old.	City Staff	Q3/4-2019		Building A Sustainable City	Wenige Bridge rehab design in its initiation stage for construction in 2020 with the roadway to follow in 2021 & 22.
TAC 19.4	2019 Vision Zero London Road Safety Strategy	Monitor progress and provide suggestions on London Road Safety Strategy action items.	LMRSC/Jayne Scarterfield	Ongoing		Leading in Public Service	LMRSC has finalized its 2019 WorkPlan which will be reviewed and received by TAC at March TAC. Jayne will provide periodic updates and any requests for TAC input as required.

	Project/Initiative	Background	Lead/ Responsible	Proposed Timeline	Proposed Budget	Link to Strategic Plan	Status
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Environmental Assessment Studies

TAC EA 18.4	Discover Wonderland	Environmental assessment for Wonderland Rd from Southdale Rd to Sarnia Rd.	City Staff	Q3-2019		Building A Sustainable City	Presented initial study to TAC on September 25 th . A follow-up presentation was reviewed and received at Feb TAC meeting.
TAC EA 18.5	Intersection: Western & Sarnia Roads	Study for improvements to Western Rd and Sarnia Rd / Philip Aziz Ave Intersection.	City Staff	Q2-2019		Building A Sustainable City	Project awaiting co-ordination with BRT.

Dear Chair and Members of the CWC,

The Wonderland Road environmental assessment currently underway is assessing HOV lanes. According to staff, these types of measures could also be assessed at a network level in the next update to the Transportation Master Plan. Because HOV lanes are another valuable option to provide priority to public transit, I suggest we adopt the following motion which the chair has agreed to second:

That HOV lanes be assessed at a network level in the next update to the Transportation Master Plan. It being noted that they provide a potential new option for transit prioritization.

Sincerely,

Michael van Holst
Councillor Ward 1