

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MAY 28, 2018</b>
<b>FROM:</b>	<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>HAMILTON ROAD AND Highbury AVENUE INTERSECTION IMPROVEMENTS ENVIRONMENTAL STUDY REPORT</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the Managing Director, Environmental & Engineering Services and City Engineer, the following actions **BE TAKEN** with respect to the Hamilton Road & Highbury Avenue Intersection Improvements Environmental Assessment:

- (a) The Hamilton Road & Highbury Avenue Intersection Improvements Municipal Class Environmental Study Report **BE ACCEPTED**;
- (b) A Notice of Completion for the project **BE FILED** with the Municipal Clerk;
- (c) The Hamilton Road & Highbury Avenue Intersection Improvements Environmental Study Report **BE PLACED** on public record for a 30 day review period; and,
- (d) Implementation timing of the improvements for the Hamilton Road & Highbury Avenue Intersection **BE REFERRED** to the 2019 Development Charges Bylaw development.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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- Civic Works Committee – June 19, 2012 – London 2030 Transportation Master Plan
- Strategic Priorities and Policy Committee – June 23, 2014 – Approval of 2014 Development Charges By-Law and Development Charges Background Study.
- Civic Works Committee – October 6, 2014 – Environmental Assessment Study Appointment of Consulting Engineer
- Civic Works Committee – March 8, 2016 – Hamilton Road & Highbury Avenue Intersection Improvements - Environmental Assessment Update

<b>COUNCIL'S 2015-19 STRATEGIC PLAN</b>
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The following report supports the Strategic Plan through the strategic focus area of “Building a Sustainable City” by implementing and enhancing mobility choices for cyclists, transit, automobile users and pedestrians. The environmental assessment identifies the solution to improve operations and safety at this intersection.

## DISCUSSION

### **Purpose**

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

### **Background**

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

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

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

### **Project Description**

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

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

## ENVIRONMENTAL ASSESSMENT SUMMARY

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

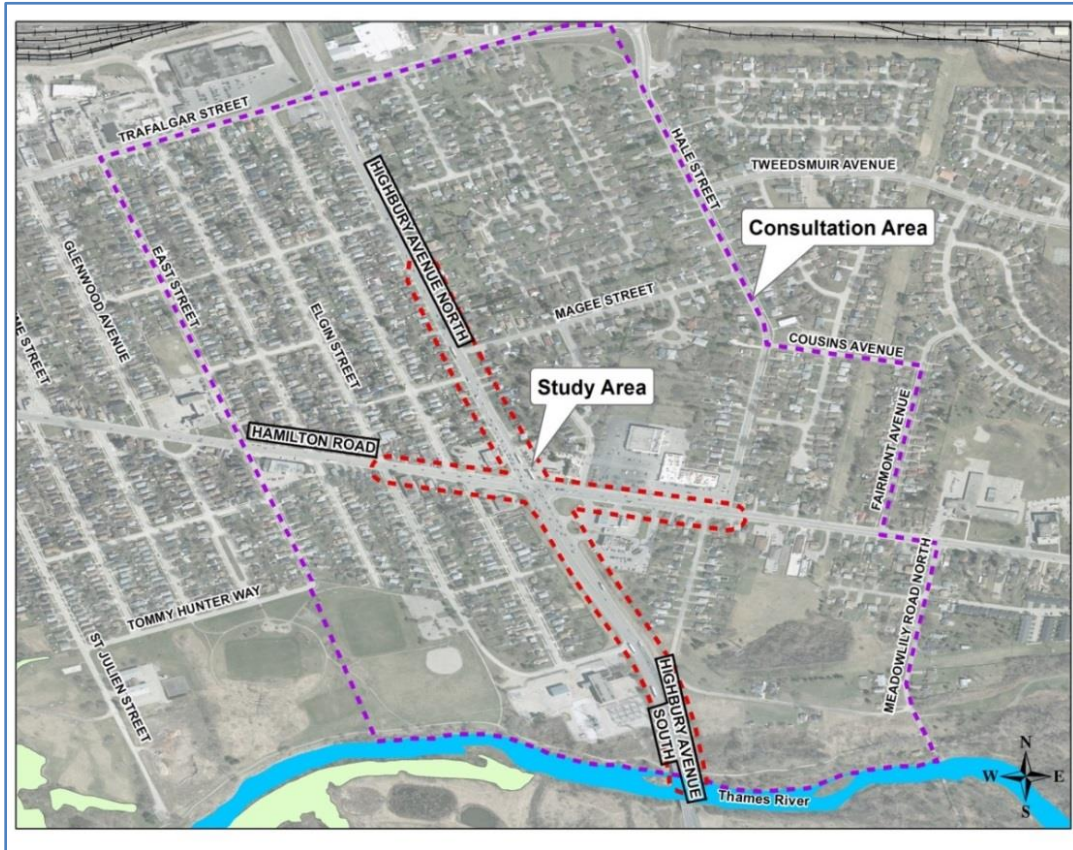


Figure 1: Study Area

## Planning and Analysis of Alternatives

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

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

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

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

All options include the following key improvements:

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

Design Options 1 to 4 include the following additional improvements:

Design Option 1:

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

Design Option 2:

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

Design Option 3:

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

Design Option 4:

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

## **Comparative Evaluation of Design Options**

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

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

## Benefits of Design Option 3

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

### Traffic Operation

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

### Landscape and Urban Design

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

### Active Transportation

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

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

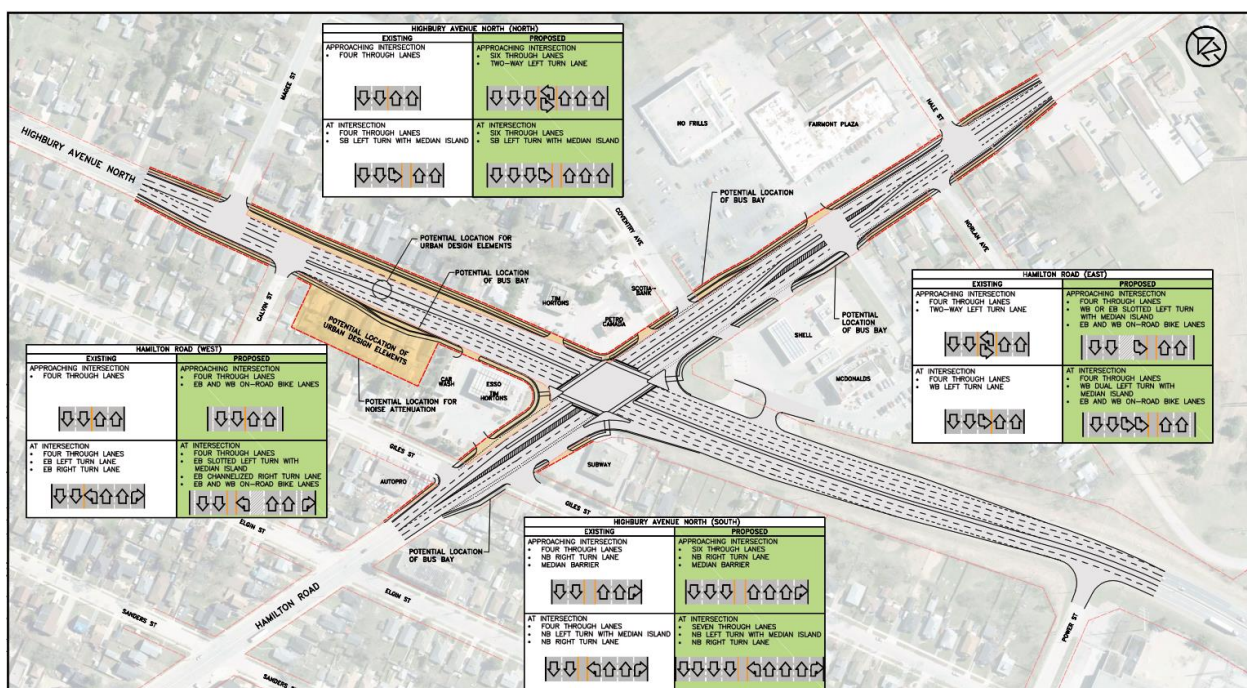
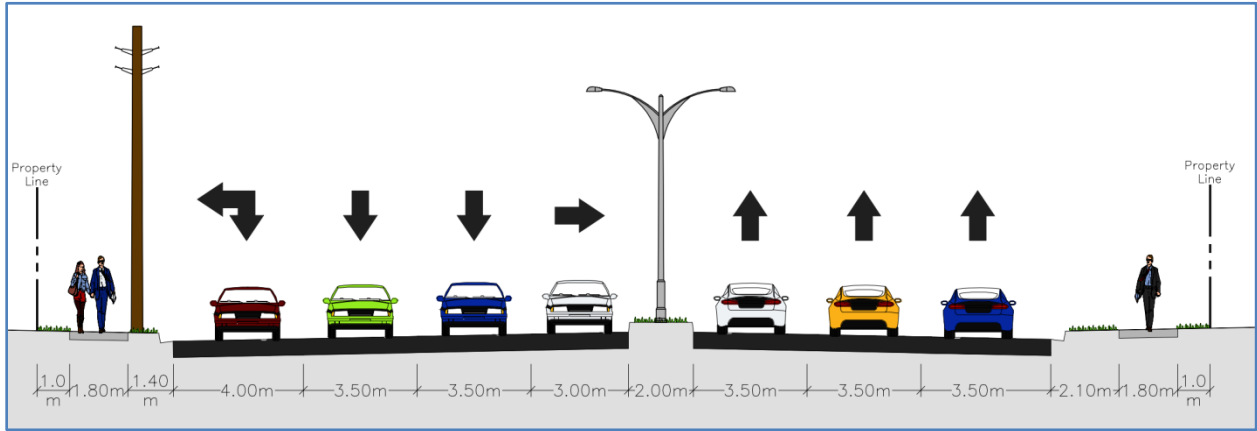
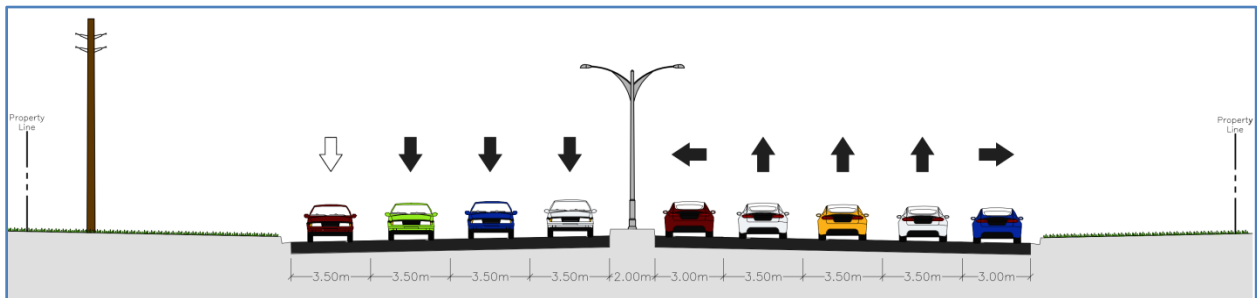


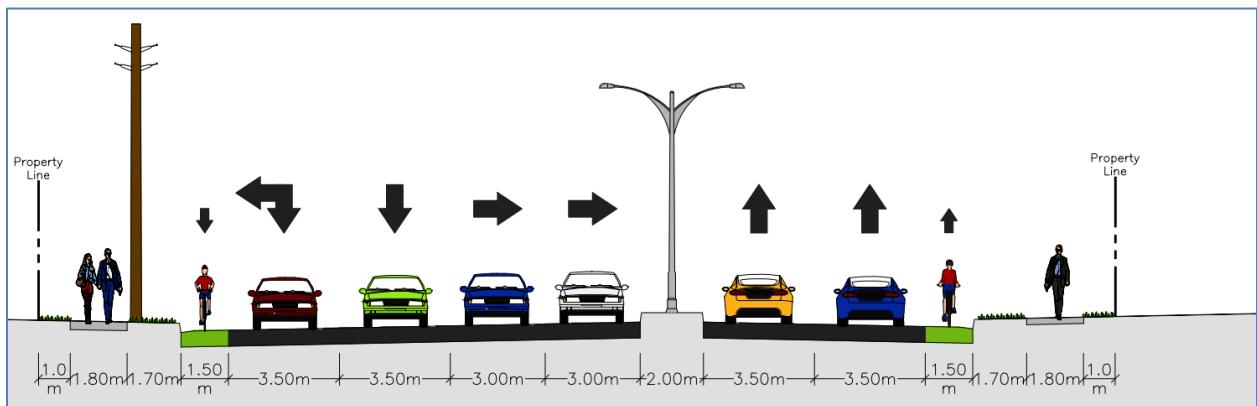
Figure 2: Preferred Design for Intersection Improvements



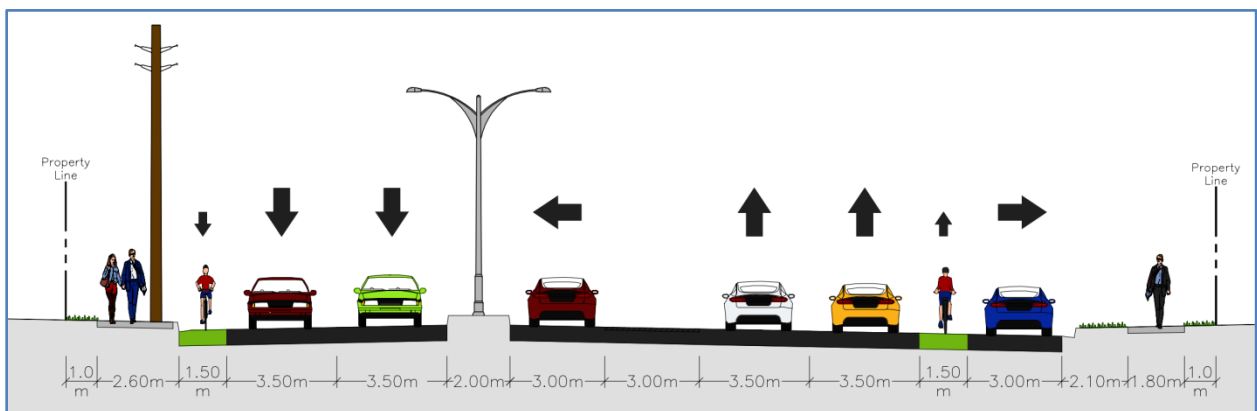
**Figure 3: Preferred Design, Highbury Avenue Cross-Section - North of Hamilton Road**



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



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



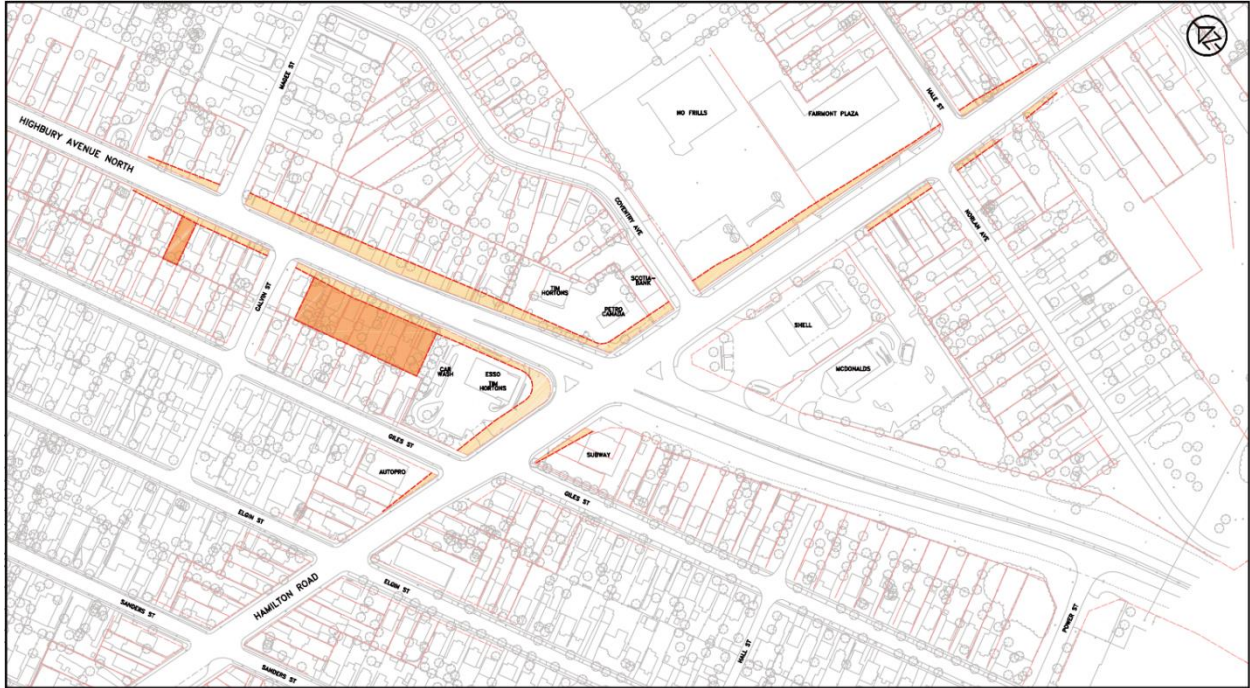
**Figure 6: Preferred Design, Hamilton Road Cross-Section- West of Highbury Avenue**

### Property Impacts

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

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

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



**Figure 7: Property Required for the Preferred Design**

## CONSULTATION

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

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

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

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

## **Consultation with First Nations**

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

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

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

## **Meetings with Residential Property Owners**

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



## FINANCIAL IMPLICATIONS AND IMPLEMENTATION

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

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

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

### Implementation

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

## CONCLUSION

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

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

Pending Council approval, a Notice of Completion will be filed, and the ESR will be placed on public record for a 30 day review period. Stakeholders and the public are encouraged to provide input and comments regarding the study during this time period. Should the public and stakeholders feel that issues have not been adequately addressed, they may provide written notification within the 30-day review period to the Minister of the Environment and Climate Change requesting further consideration.

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

### Acknowledgements

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

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<b>RECOMMENDED BY:</b>	
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Attach: Appendix A: Environmental Study Report Executive Summary

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

# Appendix A

## Environmental Study Report Executive Summary

### Executive Summary

#### Introduction

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

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

#### Phase 1 Review and Update, Problem/Opportunity Identification

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

Improvements to the intersection are required to address:

- Existing Traffic Volumes (2013 data projected to 2015, using 1.5% annual growth rate):
  - Heavy northbound and southbound straight through traffic volumes, northbound and westbound left turn volumes and eastbound right-turn volumes during morning/afternoon rush hours
  - The intersection currently operates at Level of Service (LOS) 'D' in the morning (AM) peak hour and LOS 'F' in the afternoon (PM) peak hour
- Future Traffic Volumes (projected to 2025):
  - Up to 2.5 minutes of delay and 270 metres of vehicle back-ups during weekday morning rush hour
  - More than 9 minutes of delay and up to 390 metres of vehicle back-ups during weekday afternoon rush hour
  - By 2025, with no improvements, the intersection is expected to operate at LOS 'E' in the morning (AM) peak hour and LOS 'F' in the afternoon (PM) peak hour
- Intersection Safety:
  - According to the City of London's 2014 Network Screening, the intersection ranks in the top 50 most collision-prone intersections in London. Between 2010 and 2014 there were:
    - 110 reported collisions with 40% consisting of rear end collisions
    - 24 reported collisions along Highbury Avenue North between Hamilton Road and Calvin Street, with 67% consisting of rear end collisions
- Access Management Issues:
  - Commercial and residential entrances in close proximity to the intersection contribute to the existing queuing and collision issues

- Pedestrian and cyclist needs.

## Phase 2 Review and Update, Alternative Solutions

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

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

## Phase 3, Design Options

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### Design Options

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

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

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

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

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

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

**Table ES1: Lane Configuration of Design Options**

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

\*No curbed median present

\*\*With channelized island.

## Comparative Evaluation of Design Options

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

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

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

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

## Public and Agency Consultation

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

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

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

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

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

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

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

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

### **Preferred Design**

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

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

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

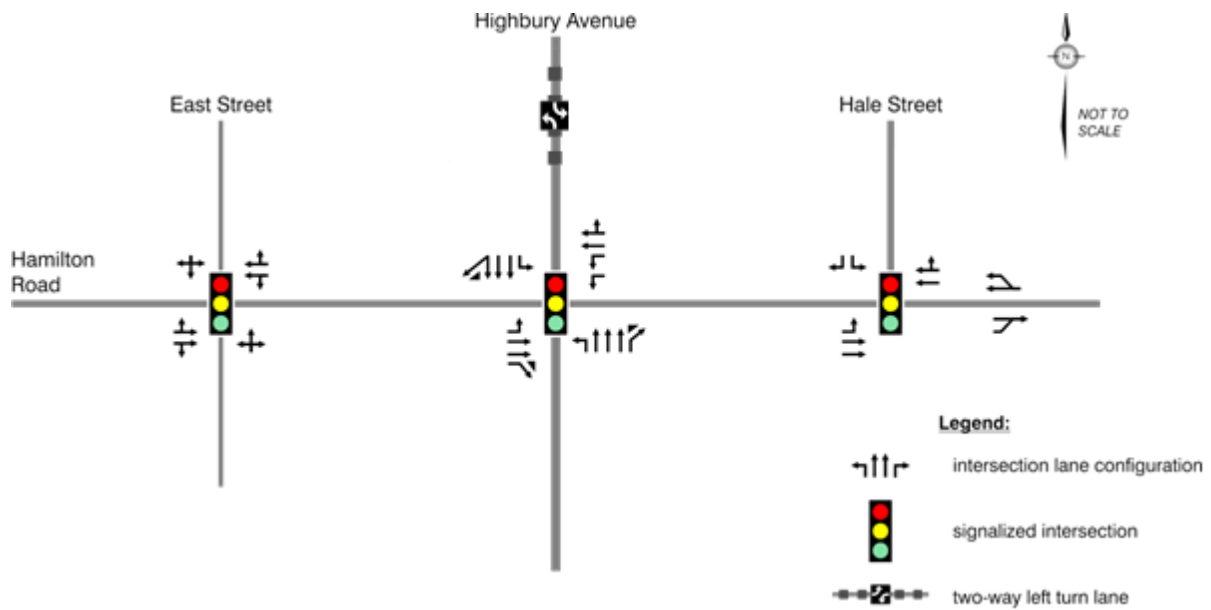


Figure ES2: Preferred Design, Lane Configuration and Traffic Control Measures

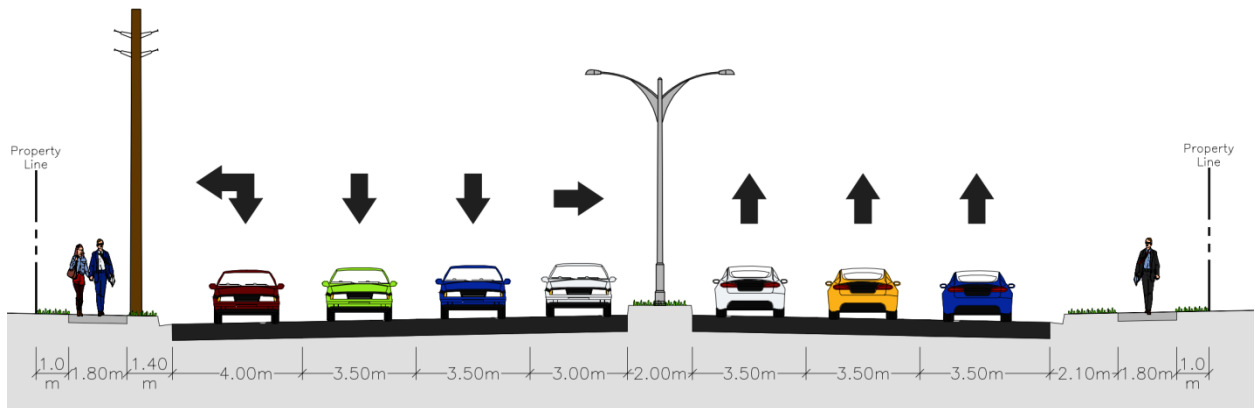


Figure ES3: Preferred Design, Highbury Avenue North Cross-Section, North of Hamilton Road

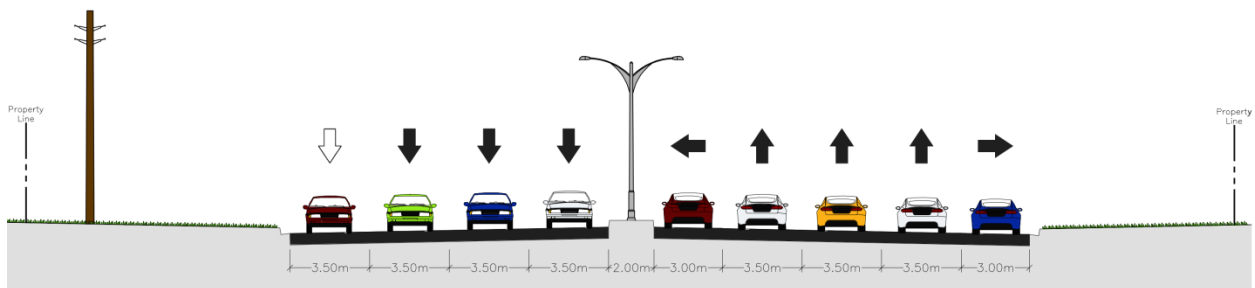


Figure ES4: Preferred Design, Highbury Avenue North Cross-Section, South of Hamilton Road

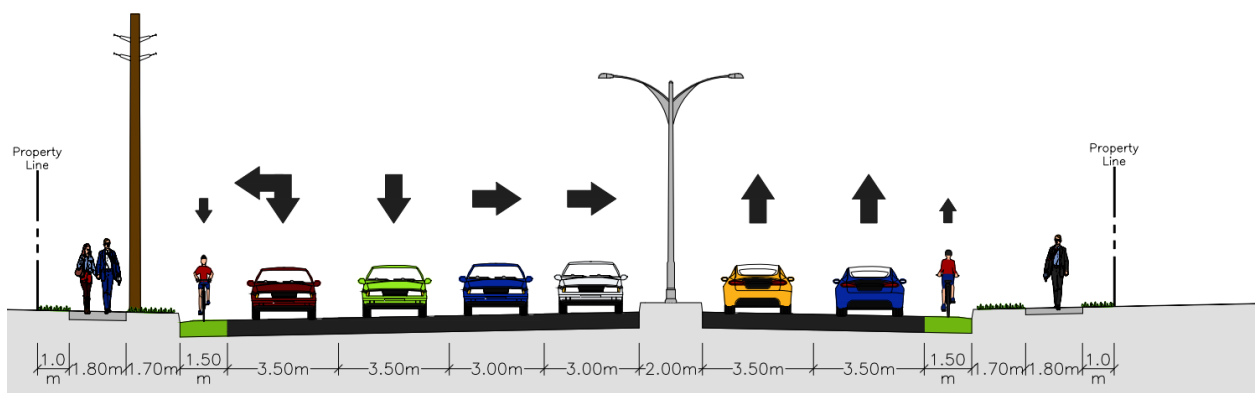


Figure ES5: Preferred Design, Hamilton Road Cross-Section, East of Highbury Avenue North



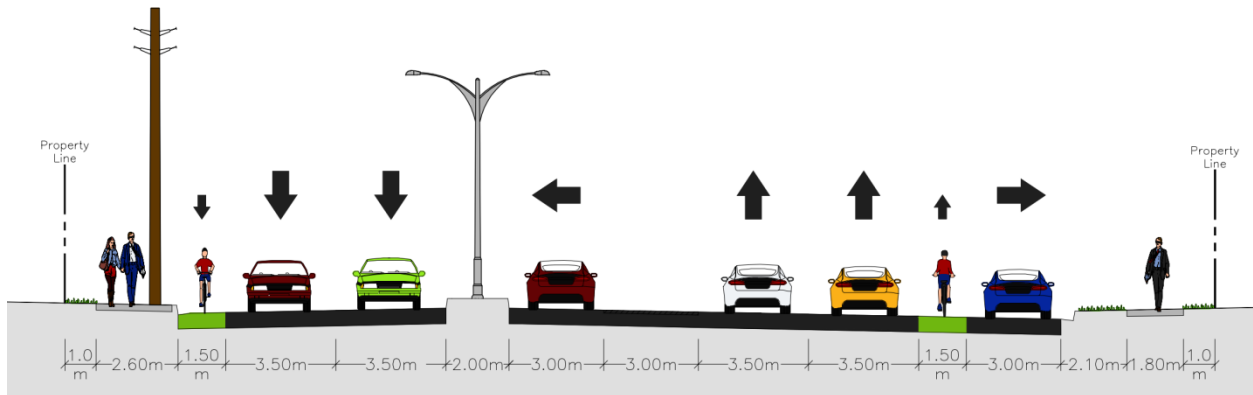
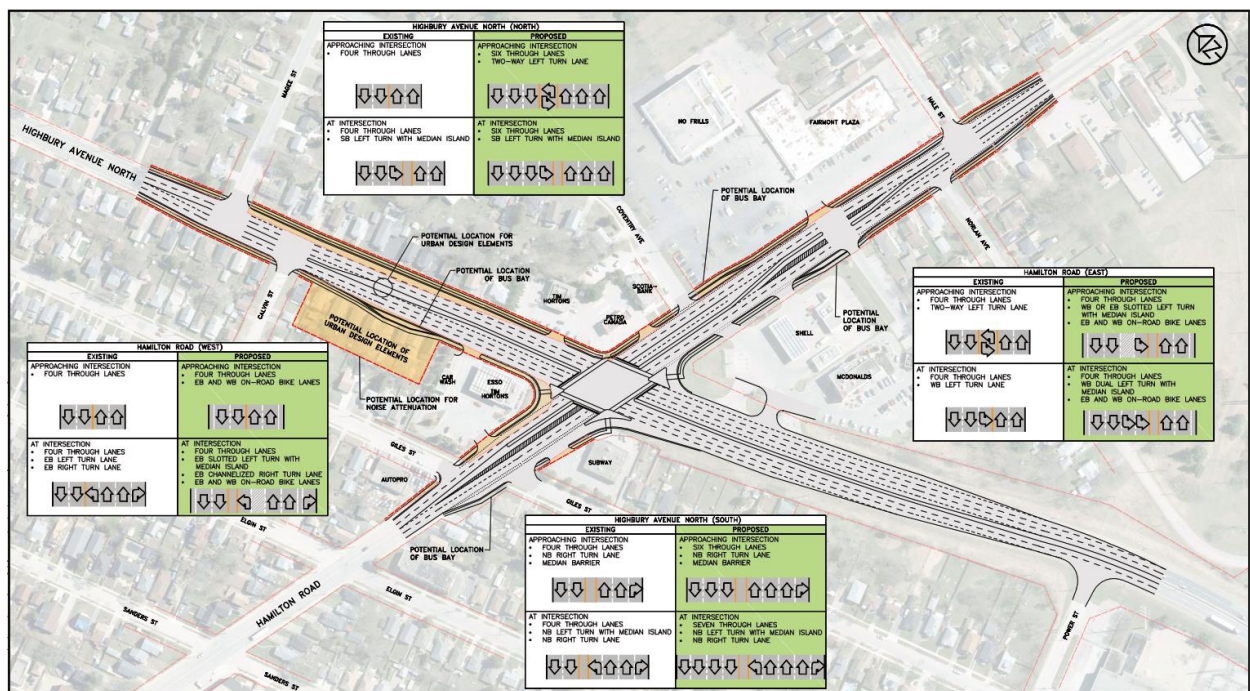


Figure ES6: Preferred Design, Hamilton Road Cross-Section, West of Highbury Avenue North



## Construction Timing and Traffic Management during Construction

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

During construction:

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

## Preliminary Construction Cost Estimate

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

**Table ES2: Preliminary Construction Cost Estimate**

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