

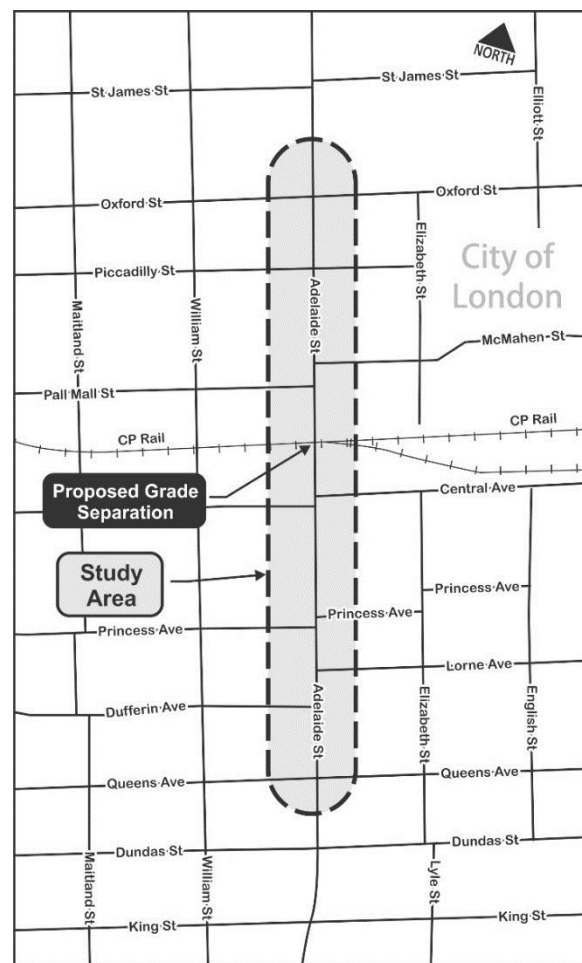
## Executive Summary

### ES1 Introduction

The City of London has completed a Class Environmental Assessment (Class EA) study for the Adelaide Street North - Canadian Pacific Railway Grade Separation. While the study has focused on the Canadian Pacific Railway Company (herein referred to as CP) rail line located just north of Central Avenue, broader needs and implications from Oxford Street, in the north, to Queens Avenue, in the south, were also considered.

Adelaide Street is a major four-lane arterial road which accommodates an average 26,000 vehicles per day through the study area. Within The London Plan, Adelaide Street North is classified as a Civic Boulevard, which places a priority on pedestrian, cycling and transit, moving 'medium to high volumes of vehicular traffic', and encourages a high-quality pedestrian realm / urban design.

The CP crossing of Adelaide Street North has been identified as the City's highest priority candidate for a new rail-road grade separation. The crossing, located on Mile 113.73 of CP's Galt Subdivision, comprises two tracks across Adelaide Street North, which reduces to a single-track west of Adelaide Street North. The Galt Subdivision is a critical route for CP's service to Canada and US customers, including local customers in the London area. CP's rail yard operates to the east of Adelaide Street North and functions as a primary train assembly point (including shunting operations) and crew hub.



The Adelaide Street North - CP Grade Separation project was identified in the City's 2014 Transportation Development Charges Background Study with a recommendation for construction in 2031. Due to the area's strategic location, the Smart Moves 2030

Transportation Master Plan (TMP) also identifies the need for traffic capacity optimization and transit priority on this corridor. The project timing was subsequently adjusted in the 2018 capital budget update for near-term implementation. The amendment considered the fastest possible project implementation with construction beginning as early as 2021, subject to EA clearance, property acquisition and railway concurrence.

The 2005 'Priority Setting Factors for Future Rail / Road Grade Separations' study (November 2005) that evaluated at-grade crossings in London indicated that the Adelaide Street North - CP crossing met the Transport Canada Rail Exposure Index Warrant for a grade separation. More recently, in 2013, the City completed a monitoring program of this crossing, observing 25 to 43 daily road blockages. The results of the 2013 monitoring program indicated a greater grade separation warrant at this location than previously considered in 2005 due to the additional road blockages created by railway shunting. Blockages of this magnitude result in total road crossing delays of 106 to 126 minutes per day. It was also observed that there was an average of 8 blockages per day that extended for more than 5 minutes.

Further railway monitoring studies completed in 2017, have confirmed that train switching activities at Adelaide Street North are significant and account for more than half of the blockages at this crossing, with approximately 5 crossing blockages at Adelaide Street North for every 2 blockages at Richmond Street. Road blockages at this crossing results in the queuing of southbound traffic that extends northerly past Oxford Street and southerly past King Street. Additionally, approximately 40% of the crossing blockages extend longer than 5 minutes.

The significant time and volume of blockages at the crossing results in cut-through traffic onto local streets as drivers attempt to find alternate routes to their destinations. Road blockages also create a response time concern for emergency services. There are no grade separated crossings of the CP track in the downtown area between Talbot Street and Quebec Street and long trains can block this entire distance. The safety concerns associated with pedestrians crossing multiple tracks, and the opportunity to create an uninterrupted north-south corridor for emergency vehicles makes this at-grade crossing location the City's highest priority for a new grade separation.

This Class EA study has satisfied the requirements of the Ontario Environmental Assessment Act by providing a comprehensive, environmentally sound planning process with public participation, and to facilitate dialogue with parties representing

many diverse interests. This Environmental Study Report (ESR) documents the decision-making process carried out during the Class EA study.

CP is an important project partner as the owner of the railway. CP has provided input to and general agreement with the preferred grade separation design. Further review with CP is required for the future detailed design phase.

## ES2 Planning Context

The planning and policy context is discussed in Chapter 2 of the Environmental Study Report. Some of the key plans / policies include:

**The London Plan** - Adelaide Street North, within the study area, is identified as a Main Street place type, and has a Civic Boulevard street classification. The Main Street place type encourages a broad range of residential, retail service and office uses. Mixed-use building is encouraged. This place type reflects the existing use and supports redevelopment / reinvestment in this area. The Civic Boulevard Street Classification places a priority on pedestrian, cycling and transit, moving 'medium to high volumes of vehicular traffic', and encourages a high-quality pedestrian realm / urban design.

The current land use / zoning (under the current Official Plan) along Adelaide Street North is predominantly Main Street Commercial Corridor with pockets of Industrial and Low Density Residential. The Main Street Commercial Corridor is intended to: provide for the redevelopment of the vacant, under-utilized and poorly maintained properties; encourage development which maintains the scale, setback and character of the neighbourhood; encourage common parking areas instead of individual access points and parking areas; encourage mixed use development to achieve higher densities and reinforce the modal shift to transit and active transportation.

**City of London 2030 Transportation Master Plan (2013)** - One of the five key initiatives of the TMP is a More Strategic Program of Road Network Improvements. There is a greater emphasis in this TMP on transit, active transportation, and Travel Demand Management (TDM) many road improvements will be required. The City's approach to defining the need for road network improvements has become more strategic. Road widening projects in urban built-up areas have generally been avoided so as not to compete with, or undermine, priority transit corridors, except where required to fill in between adjacent segments or at key constraint areas. This approach is consistent with the City's expectation that transit and active transportation modal shares

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

In this regard, a number of projects are required to complement the Bus Rapid Transit (BRT) initiative. Among the TMP road projects identified is Adelaide Street North – CP Grade Separation. Due to the area's strategic location, the TMP identifies the need for traffic capacity optimization and transit priority on this corridor.

**City of London Strategic Plan (2015-2019)** - The project supports the Strategic Plan through the strategic focus areas of: building a sustainable city by providing robust infrastructure and improving safe mobility for pedestrians, cyclists, transit users and drivers; and strengthening our community by contributing to a healthy, safe and accessible City.

**2014 Development Charge Background Study** - The DC Background Study included an "Adelaide Street – CP Overpass" and identified high level funding allocations as well as recommended timing for implementation of 2031. Through the current Development Charges Study Update (2019), the funding allocation has been adjusted (increased) and implementation timeframes have been advanced. Through the Class EA study, the recommendation has been made for an underpass.

**SHIFT: London's Rapid Transit Initiative** - The Rapid Transit (RT) network will rely on strategic road improvements to support the City's overall transportation network. Adelaide Street North is strategically positioned as a north-south arterial route that offers a transportation alternative to Richmond Street for vehicular traffic and an opportunity to create a more efficient London Transit network to connect with and support RT via the stop planned at King Street.

**Cycling Master Plan (2016)** – The Class EA study considered the existing and proposed cycling network and has provided recommendations with respect to enhancing the network and facilities within the study area.

**Rail Rationalization Study** – Undertaken in response to Council's direction for City staff to work with appropriate parties, including the Canadian Transportation Agency (CTA) to request they facilitate discussion between CP and CN in order to negotiate an agreement for CP operations to relocate and merge onto the CN operational tracks within the City of London limits. In response to Council's direction, Civic Administration has held several meetings with the railway companies and authorities. The report summarizing CP and CN positions on the concept of a rail rationalization can be found at:

<https://pub-london.escribemeetings.com/filestream.ashx?DocumentId=46514>

Based on the outcomes of the study, it is recommended that the City continue with planning strategic grade separations, including the Adelaide Street North - CP Grade Separation that is the subject of this Class EA study, combined with the implementation of technologies or infrastructure aimed at improving the safety of the rail/urban interface as the long-term approach to mitigating the impact of rail activity in the City of London.

### ES3 Traffic Analysis

Within the study area, Adelaide Street North is an arterial roadway with a 4-lane cross-section (two lanes in each direction). The posted speed limit is 50 km/h within the study area. London Transit Route 16 and 92 provide service on Adelaide Street North.

The traffic analysis was undertaken for a broad study area that included the Oxford Street East intersection, in the north, and Queens Avenue intersection, in the south, and included fourteen intersections.

The full traffic analysis (**Appendix A** of this ESR) included intersection recommendations for consideration on Oxford Street and Queens Avenue.

Key findings of the transportation assessment (**Chapter 2**) relative to the grade separation are summarized below:

- ▶ Adelaide Street North carries approximately 26,000 vehicles per day in the north-south direction. The southbound traffic peaks during the morning peak hour, and the northbound traffic peaks during the afternoon peak hour.
- ▶ During the five-year period from 2011 to 2015, a total of 468 collisions were recorded on the study area corridor, including 349 collisions at intersections (75%) and 119 collisions on mid-blocks (25%).
  - Approximately 50% of the intersection collisions occurred at the Oxford Street East intersection. This intersection has experienced 173 collisions, including one fatal collision in the five-year period.
  - The Queens Avenue intersection experienced 72 collisions in the five-year period.
- ▶ Thirty-five mid-block collisions occurred between Oxford Street East and Piccadilly Street during the five-year period, resulting in the highest collision rate of 0.78 for mid-blocks. The mid-block between Pall Mall Street and Central

Avenue has experienced 30 collisions from 2011 to 2015. Potential contributing factors for mid-block collisions include: driver frustration due to delays at the CP rail crossing, substandard lane widths, absence of dedicated turning lanes and high density of accesses / drive-ways along the corridor.

- ▶ Road blockages on Adelaide Street North created by CP operations through the at-grade rail crossing, result in significant delays for all the road users and creates long queues and gridlock in the area. To address this issue, a grade separation is essential.
- ▶ In addition to the proposed grade separation, and based on the intersection operational analysis results, improvements were identified for the following intersections:
  - Pall Mall Street Intersection: converting existing intersection configuration into a right-in / right-out and relocating the signalized pedestrian crossing to McMahan Street (this relocation is required to address the geometric constraints with the proposed grade separation);
  - Central Avenue Intersection: realigning the east and west legs of Central Avenue to eliminate the existing jog and providing dedicated turning lane for all the left turn movements.

Preliminary recommendations were also identified for Oxford Street and Queens Avenue. These were reviewed carefully by the project team and, based on comprehensive consideration of potential property requirements, impacts to major utilities and potential impacts to other road users (e.g. pedestrians and cyclists), the intersection recommendations for Oxford Street and Queens Avenue have been set aside from further consideration in this Class EA study.

The complexity of the Oxford Street intersection at Adelaide Street and the potential scale of property impacts is deemed to warrant a separate and dedicated Class EA study. Similarly, potential intersection improvements that could be considered at Queens Avenue have been set aside in the current study and can be revisited in future.

## **ES4 Problem and Opportunity Statement**

Phase 1 of the Municipal Class EA involved identifying study area problems and opportunities. Considering the transportation planning policy context, the analysis of existing and future traffic conditions and public input, the following problem and opportunity statement was developed:



Adelaide Street North is an important north-south arterial roadway and the centre of the local community, providing access to a variety of local destinations and supporting both city-wide and local mobility for many different users (pedestrians, cyclists, transit patrons, and drivers).

Previous studies (2005, 2013, 2017 / 2018) all confirm that Adelaide Street North meets the Transport Canada rail exposure index warrant for a grade separation.

The significant time and volume of blockages at the crossing results in cut-through traffic onto local streets as drivers attempt to find alternate routes to their destinations. Road blockages also create a response time concern for emergency services. There are no grade separated crossings of the CP track in the downtown area between Talbot Street and Quebec Street and long trains can block this entire distance. The safety concerns associated with pedestrians crossing multiple tracks, and the opportunity to create an uninterrupted north-south corridor for emergency vehicles makes this at-grade crossing location the City's highest priority for a new grade separation.

The Rail Rationalization Study confirms the City's continuing approach of planning for strategic grade separations rather than pursuing large scale relocation / rerouting of CP operations.

Providing a new road-rail grade separation on Adelaide Street at the CP crossing will increase roadway safety by removing the potential for conflict between pedestrians, cyclists, drivers and CP operations, improve traffic flow / operations by managing congestion and provide route reliability for emergency services and local transit.

The implementation of the grade separation will support the Rapid Transit (RT) initiative by providing vital parallel roadway network improvements to facilitate the rapid transit implementation. The improved transportation network performance, reliability and efficiency on Adelaide Street will benefit the London Transit / Transit Priority network and the connection to the BRT network at the King Street stop.

The project provides an opportunity to improve active transportation choices / facilities and linkages. The project also creates the opportunity to improve safety and mobility for all road users as well as contribute to the neighbourhood setting with a lively streetscape / urban design.

## ES5 Planning Alternatives

Phase 2 of the Municipal Class EA involved identifying alternative planning solutions. The following alternatives were assessed against their ability to reasonably address the problems and opportunities, in consideration of the constraints identified in the early stages of the study:

1. Do Nothing; Intersection Improvements;
2. Transportation Demand Management;
3. Traffic Capacity Improvements; and
4. Grade Separation.

Based on public feedback received at PIC 1, the project team expanded the range of potential planning solutions to include:

5. Change in CP Rail Operations; and
6. Partial Grade Separation.

As noted above and discussed in **Chapter 2** of the ESR, the City's Rail Rationalization Study addressed the broader questions related to CP (and CN) operations within the City of London.

### Recommended Planning Solution

The evaluation process concluded that the preferred planning solution includes: Grade Separation; and Intersection Improvements. This solution directly addresses the primary problems and opportunities in the long term. This solution will separate rail traffic from vehicles, transit, cyclists and pedestrians, improving safety of all users and increasing the reliability of the transportation network. This should result in a reduction in cut-through traffic onto local streets. This solution provides an opportunity to improve the streetscape, creating a safe and welcoming space for pedestrians and contributing to the surrounding neighbourhood.

## ES6 Design Alternatives

Phase 3 of the Municipal Class EA process involved the generation and evaluation of design alternatives for the following aspects of the overall design:



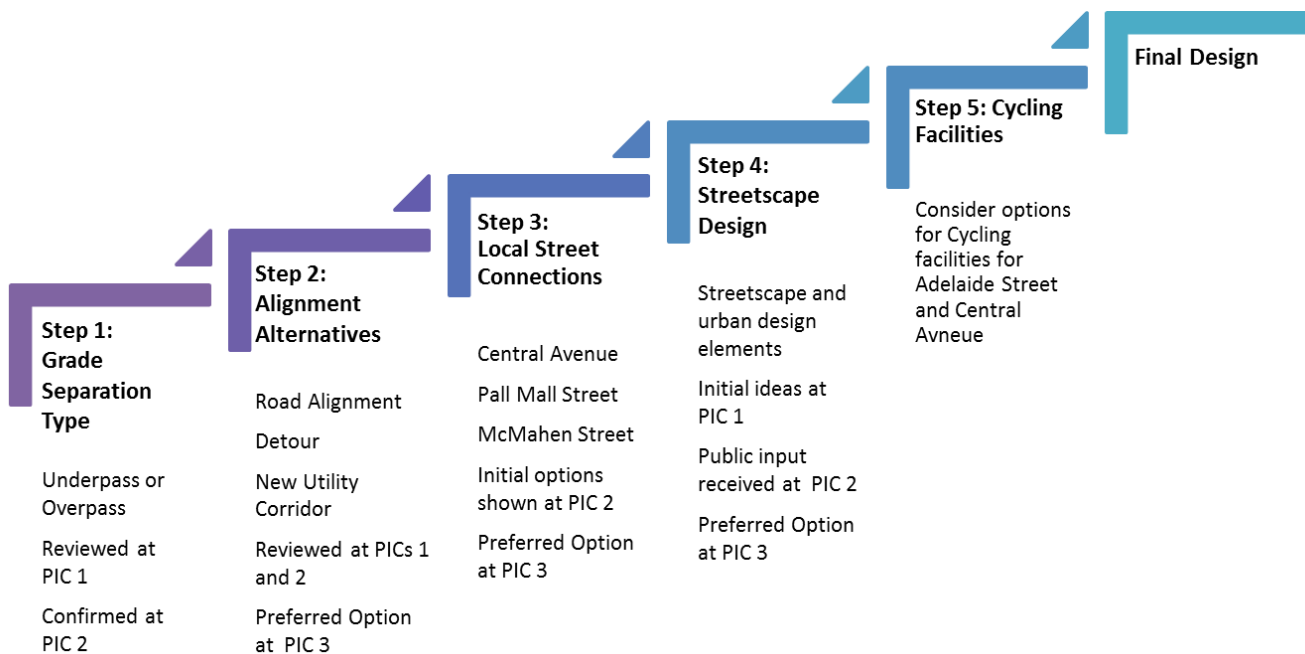
- ▶ Grade separation type (underpass or overpass);
- ▶ Alignment alternatives (for road, detour and utility / service corridor);
- ▶ Local street connections for Central Avenue, Pall Mall Street and McMahan Street;
- ▶ Streetscape design; and
- ▶ Cycling Facilities.

The evaluation of design alternatives was a step-wise process with decisions and outcomes of steps predicated on previous outcomes / decisions. The following graphic depicts this process and when various design alternatives were reviewed with the public.

### Design Alternative Evaluation Process

Design is a step-wise process with each step building upon known conditions / constraints and decisions made previously.

As the design progresses and our knowledge of conditions / constraints evolve, there may be design iterations



Numerous factors influenced the generation, assessment, and evaluation of the design alternatives, for example:

- ▶ Community mobility, connectivity, character and direct community feedback / input; integration with surrounding community (context sensitive design), streetscape and urban design;
- ▶ Safe multi-modal transportation choices and the creation of a comfortable pedestrian and cycling environment that encourages these activities;
- ▶ Minimizing impacts to properties and businesses,
- ▶ McMahan Park Gates, trees and open space;
- ▶ Protecting cultural heritage resources;
- ▶ Cultural Heritage resources, adjacent Heritage Conservation Districts
- ▶ Technical factors including: utilities and municipal services, transportation network, road design, stormwater and groundwater management, constructability, cost;
- ▶ CP Operations including opportunities to modify CP infrastructure, operational constraints such as maximum closure periods etc.

## **ES7 Preferred Plan Summary**

Based on the evaluation of design alternatives, the Preferred Plan consists of the following key aspects:

- ▶ Underpass Grade Separation: The underpass, or subway, is preferred because there are fewer property impacts, relatively little visual intrusion to surrounding community; decreased traffic noise from roadway; maintains intersections of local streets; more attractive to pedestrians and cyclists; preferred by community (when compared to the overpass design alternative).
- ▶ New rail structures consisting of two single-span through plate girder bridges with reinforced concrete abutments. The span is approximately 31.0 m. Minimum vertical clearance through the underpass is 5 m. One option under consideration for in-place construction is the “Trestle and Lift-In Place Method”.
- ▶ A new pump station located on the west side of Adelaide Street North, just north of Central Avenue. The stormwater pump station will be designed alongside an underground stormwater detention facility designed to retain the 100-year storm

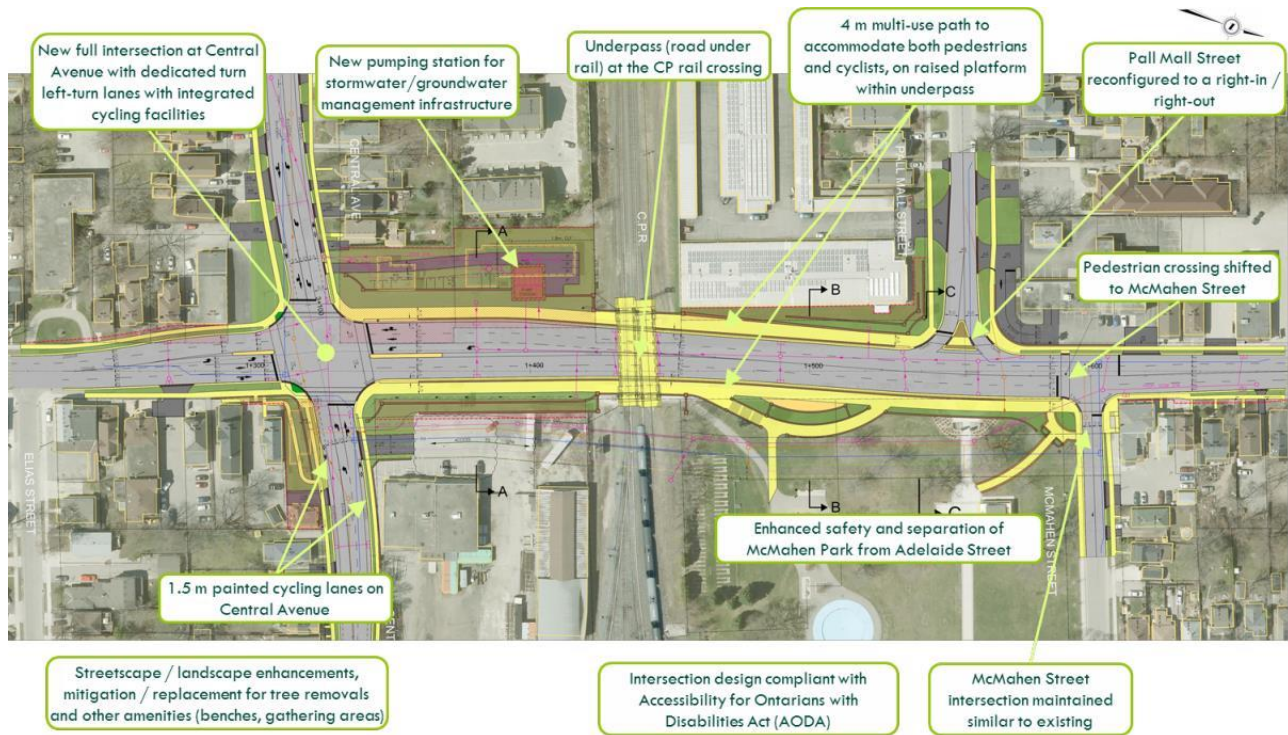
event. The pump station will be designed with two (2) inlet gravity sewers. One pipe will accommodate the storm drainage from the Adelaide Street road drainage system while the second pipe will carry groundwater flow. Once discharged in the station wet well, stormwater is pumped through an oil/grit separator to the underground storage detention facility. Ultimately, all pumped stormwater is conveyed to the local downstream storm sewer at the intersection of William Street / Central Avenue where it is conveyed to an existing outlet at the Thames River. The groundwater system will outlet into a separate wet well and be pumped to a separate underground storage detention facility for possible treatment, as required. The stored water will then be conveyed and enter the local sanitary sewer or storm sewer system. Treatment and outlet will be confirmed during detail design. Potential treatment requirements and outlet locations will be confirmed during detail design.

- ▶ ‘Central’ Alignment of Adelaide Street: minimizes overall property impacts, maintains straighter road which is better for users, maintains local street fabric / connections and minimizes impacts to CP infrastructure.
- ▶ Temporary road detour on east side of Adelaide Street: maintains north-south traffic including emergency services during construction, avoids permanent property impacts beyond those required for grade separation, utilizes same footprint as the new service / utility corridor. The temporary road detour was assumed having 4 lanes for the EA assessment. However, based on further consultation with CP, the implication on railway operational safety, significant impacts to the rail yard infrastructure, and costs, may deem the detour not feasible with 4 lanes. It is possible that a 2-lane detour be implemented, pending further review and design with CP.
- ▶ A new service and utility corridor on east side of Adelaide Street: minimizes permanent property impacts and integrates well with the proposed temporary road detour.
- ▶ Central Avenue full intersection: improved safety of all users, improved transportation / active transportation network and community connectivity, improved traffic operations. Includes dedicated left turn lanes and proposed painted cycling lanes on Central Avenue.
- ▶ Pall Mall Street right-in / right-out: maintains access to southbound Adelaide Street. Left-turn movements removed for safety, given proximity to underpass.
- ▶ McMahan Street: maintain existing intersection. Signalized pedestrian crossing will be shifted to McMahan Street. Traffic signals are not being recommended at

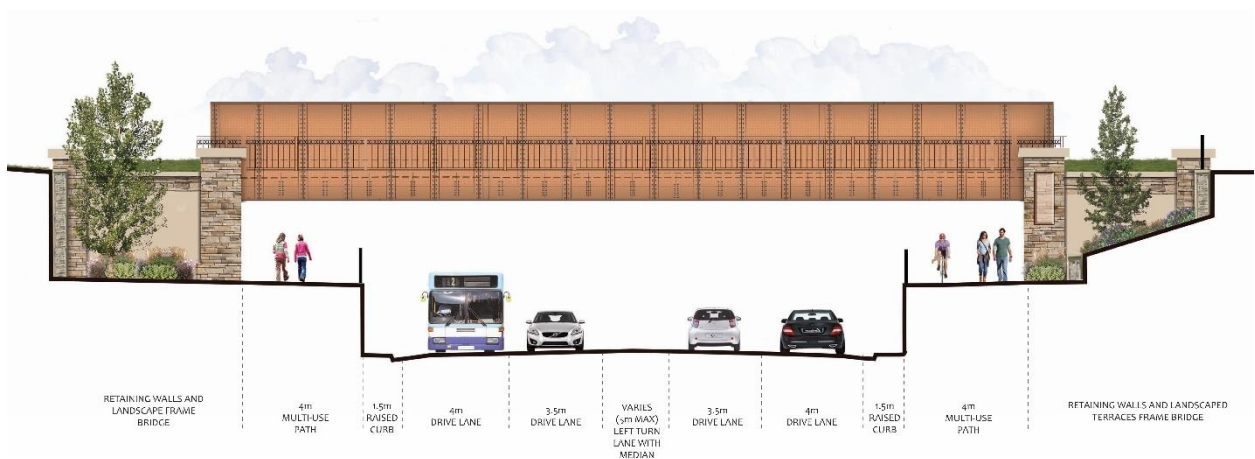
this time due to additional property impacts and concerns of attracting more cut-through traffic from Oxford Street.

- ▶ McMahan Park will be elevated above Adelaide Street and separated from vehicle traffic by railing, terraces and landscaping creating a more intimate park setting.
- ▶ The existing gateway to McMahan Park, opposite Pall Mall Street, will be relocated to the southeast corner of the McMahan Street intersection.
- ▶ Cycling facilities that include:
  - Adelaide Street North - 4 m multi-use path on the raised platform within the underpass, connecting to Pall Mall / McMahan Street and Central Avenue;
  - Central Avenue – painted 1.5 m bike lanes, with intersection design to connect to cycling facility on Adelaide Street North;
  - Pall Mall Street / McMahan Street – signed bike route with appropriate signage to facilitate the connection at McMahan Street pedestrian crossing will be developed in detailed design.
- ▶ A Streetscape Design Concept, strongly based on community feedback, that integrates the underpass with the surrounding neighbourhood.

### Preferred Plan Overview



### Adelaide Street North Road Cross-Section through the Underpass



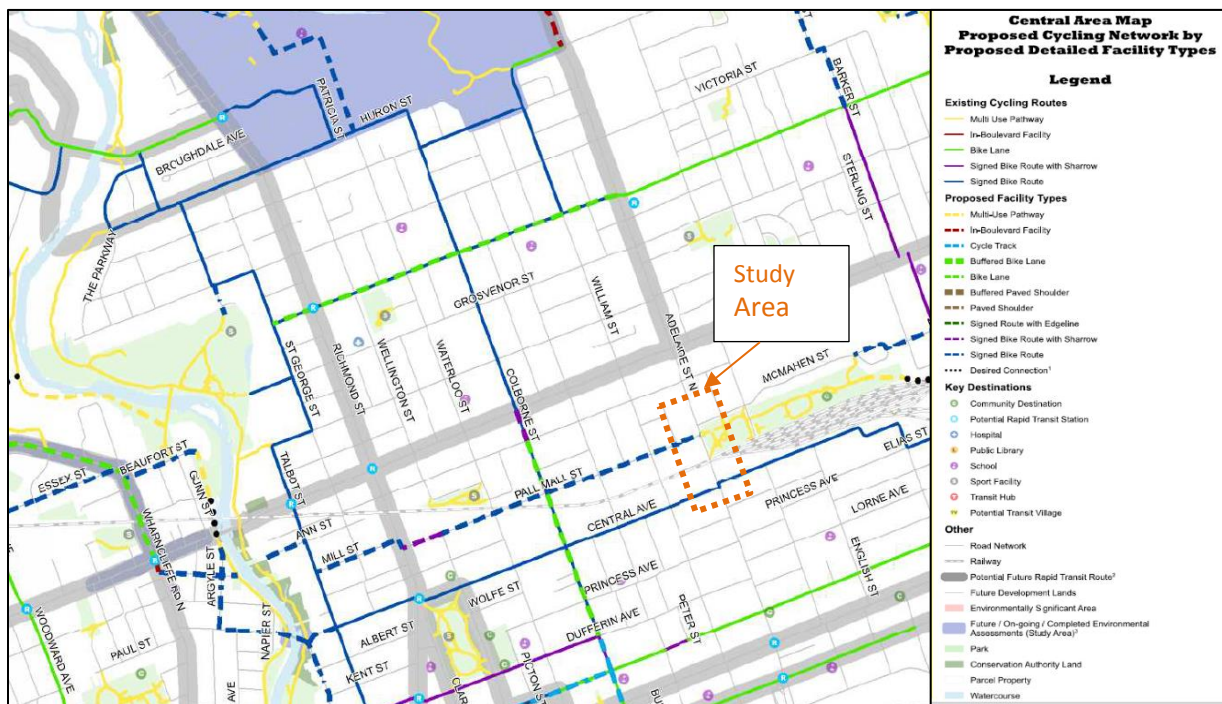


## Cycling Facilities

The 2016 Cycling Master Plan identified the following components of the cycling network, in the study area:

- ▶ Existing Signed Bike Route on Central Avenue;
- ▶ Proposed Signed Bike Route on Pall Mall, starting at Adelaide Street;
- ▶ Proposed Signed Bike Route on McMahan Street for a short segment, east of Adelaide Street; and
- ▶ No facilities were identified on Adelaide Street North, within the study area

### Cycling Master Plan (2016) Excerpt



This project has provided an opportunity to review the existing and proposed cycling network within the study area and provide updated recommendations for network connections and facilities in the context of the proposed transportation improvements.

The intent to accommodate cyclists through the underpass was recognized early in Phase 3, given the long-term investment and structure life-span of the underpass.

As discussed in **Chapter 5** of the ESR, early design concepts reflected the intent to provide space within the paved shoulder for on-road cyclists.



The preliminary preferred design, depicted conceptually at PIC 3, included 3 m shoulders at street level on Adelaide Street North. Cyclists who did not wish to be on the road could utilize the 3 m pathway within the raised platform of the underpass – a space that would be shared with pedestrians.

In response to the public feedback received at and following PIC 3, and through further review within the project team, two further cycling design options for Adelaide Street were developed and reviewed. The two options reviewed in the final stages of the Class EAs study (**Chapter 5**) were:

- ▶ Option 1 - provide a separated cycling facility by providing a minimum 4.0 m wide multi-use pathway (MUP) on the raised platform through both sides of the underpass. This MUP would be used by cyclists and pedestrians on both sides of the road.
- ▶ Option 2 - provide 3 m pedestrian sidewalks on a raised platform through the underpass and 3 m separated bike lanes (e.g. cycle track), at street level.

Given that Adelaide Street North is not proposed to have on-street designated / separated cycling facilities downstream and upstream of the grade separation, the project team concluded that a cycling connection through the grade separation does not need to be at street level. It is believed that cyclists approaching the underpass (whether coming from Adelaide, Central or Pall Mall Street / McMahan Street) will prefer to avoid the full grade change on the street (6%) by using the MUP which would be elevated above street level and therefore will require less effort to pass through.

Option 1 is viewed as “more comfortable” for a broader range of users (e.g. all ages and abilities) because of the greater separation from motor vehicles.

Even if Option 2 were selected, there will always be some cyclists who will not be comfortable cycling at street level.

A key advantage of Option 1 is less maintenance effort and cost.

Therefore, the preferred option for the cycling facility on Adelaide Street North, is for a 4 m multi-use path on the raised platform within the underpass, connecting to Pall Mall / McMahan Street and Central Avenue.

The design of the cycling facility on Central Avenue has evolved through discussion with stakeholders, the community and City staff. The Cycling Master Plan identified Central Avenue for a signed bike route. However, the design concept shared with the public at

PIC 3 reflects to City's intent to provide painted on-road bike lanes on Central Avenue with integrated cycling facilities at the Adelaide Street North intersection. Further review of the design and impacts of the cycling facilities

A signed bike route on Pall Mall Street and McMahan Street, per the Cycling Master Plan, will connect to the multi-use path on Adelaide Street North. Appropriate signage to facilitate the connection at McMahan Street pedestrian crossing will be developed in detailed design.

## **Streetscape Design**

The development of the Streetscape Design Concept was an iterative process, based on the technical design requirements and the evolving understanding of design constraints, the definition of the 'public' realm (i.e. areas beyond the roadway available for streetscape design) and input from all City departments, Community Association representatives and members of the public. The streetscape concept was prepared based on the following principles:

- ▶ Integrate the underpass visually into the surrounding neighbourhood;
- ▶ Minimize impacts to buildings, property and businesses;
- ▶ Create a pedestrian-friendly, safe and vibrant streetscape;
- ▶ Establish and maintain pedestrian and cycling connections between destinations across and along Adelaide Street North;
- ▶ Frame and enhance the new bridge through aesthetic treatments that provide a visual amenity to the community, create opportunities for neighbourhood identity features and reference heritage architectural styles and patterns, and identify opportunities for new and enhanced public spaces.

Community input was vital to the development of the streetscape concept plan. Proactive and direct feedback from representative of the Piccadilly, Woodfield and Old East Village Community Associations and the Old East Village BIA was incorporated into the design, as feasible for this conceptual stage of design.

The PIC 2 / Workshop was instrumental in obtaining meaningful community feedback on specific streetscape design elements such as sidewalk configuration, side treatments, pedestrian space, aesthetic and theming opportunities, and landscape design. The exhibit below summarizes community preferences and feedback from the Workshop and what has been achieved in the streetscape design concept.

## Summary of Public Input to the Streetscape Design and How It Was Addressed

**What you preferred:**

- Commercial redevelopment on surplus property and 3 m sidewalk or 5 m landscaped promenade

**What we accomplished:**

- Wide landscaped promenade near Central Avenue transitioning to a 4 m multi-use at underpass
- New public park space and urban aesthetic in streetscape design
- Necessary stormwater and groundwater management infrastructure integrated with park space (i.e. no surplus property)

**What you preferred:**

- Split preference for commercial redevelopment of surplus property or a landscaped/ terraced urban park, and 3 m sidewalk

**What we accomplished:**

- Ability to minimize property impacts and maintain the existing businesses
- 4 m multi-use path
- Streetscape design that utilizes all available right-of-way to create an attractive pedestrian way

**What you preferred:**

- Split preference for commercial redevelopment (if CPR disposes of lands) or landscaped / terraced slope and 5 m sidewalk

**What we accomplished:**

- 4 m multi-use path
- Terraced landscape slope (2 terraces)
- Ability to minimize property impacts to CP lands – does not preclude continued leased commercial use or future redevelopment

**What you preferred:**

- A landscaped transition and access to McMahan Park with 3 to 5 m sidewalks and terraces

**What We Accomplished:**

- Landscaped transition and access to McMahan Park with a 4 m multi-use path with walkway into park and terraces
- Heritage gates relocated to create new entrance from McMahan Street



### View North at Adelaide Street North and Central Avenue



## Streetscape Concept



- A. Low retaining walls with decorative treatments and landscape, frame intersection and approach to new bridge.
- B. Pillar and wall treatment reflect local architecture.
- C. Ramp and stairs maintain access to business from street.
- D. Rear parking access.
- E. A linear parkette creates opportunities to incorporate wildflowers and rain gardens. Community events or exhibitions / installations could also occur in the parkette in the future.
- F. Pump station can feature architectural detailing to blend into the community fabric.
- G. Parking and access for pump station.
- H. Landscaped terraces with decorative retaining walls and pillars.
- I. Opportunities to incorporate design elements into the bridge will be reviewed with CPR. Otherwise these elements can be provided adjacent to the CPR right-of-way to create a similar visual impact.
- J. Elevated walkway reduces walking distance, raises sidewalk and multi-use path above street.
- K. Landscaped terraces.
- L. Ramps/stairs provide access to park from sidewalk (elevated walkway).
- M. McMahan Park will be elevated above Adelaide Street and separated from vehicle traffic by railings, terraces and landscaping, creating a more intimate park setting and enhancing the experience and safety of the park.
- N. McMahan Gate relocated to new park entrance at corner.

## ES8 Preliminary Property Requirements

Significant efforts have been made during the Class EA study to minimize property impacts, including:

- ▶ Maintaining a central alignment of Adelaide Street North;
- ▶ Providing the traffic detour and utility corridor along the east side of Adelaide Street North;
- ▶ Providing a 'best-fit' design for the realigned Central Avenue intersection; and
- ▶ Maintaining the existing connections to Adelaide Street North from Pall Mall Street and McMahan Street (although access to Pall Mall Street will now be restricted).

Despite these measures, some sections of the Preferred Plan have a substantial change in the road profile and therefore impacts to properties will be unavoidable. The complete list of property impacts is provided in the table below.

The Preferred Plan will have full or partial impacts to 17 properties. Approximate property impacts are summarized in the table below. Discussions between the Project Team and property owners during the EA regarding these impacts and potential accommodations are noted in **Chapter 7** of the ESR. Minor impacts to driveway re-grading or to City owned property are not included in the overall study impacts.

- ▶ Four properties have been identified as likely to be fully impacted due to road grade changes and closure of access to Adelaide Street. These are: 595 Adelaide Street (Food Mart / Petro Line), 600 Adelaide Street (southeast corner of Adelaide Street and Central Avenue), 627 Central Avenue (residential property east of Adelaide Street), and 625 Adelaide Street (AutoSpa Car Wash). None of these properties are included on the City of London Inventory of Heritage Resources as listed or designated.
- ▶ One property, 665 Adelaide Street (Storage Mart), is likely to have partial impacts to the building due to the construction of the retaining walls for the underpass. The extent of impacts to the building located on the east side of the property will be determined during detailed design in consultation with the owner.
- ▶ Thirteen properties are likely to have minor impacts to frontage with three of them potentially requiring some modifications to maintain access, as summarized below. The City will continue to work with the property owners to find an acceptable solution:



- 596 Adelaide Street North (Cat Hospital) will require reconfiguration of the Adelaide Street entrance to account for the new sidewalk elevation / grade.
- 682 Adelaide Street (Frank and Gus Pizza) will require reconfiguration of the storefront access on Adelaide Street to account for the new sidewalk elevation / grade. Access to the rear parking area will be maintained.
- 589 Adelaide Street (Northend Bodyshop) will require reconfiguration of the garage bay access to account for the closure of the access from Adelaide Street due to the road elevation / grade change.

The property at 620 Adelaide Street is owned by CP. Temporary and permanent impacts to this property are being discussed with CP as part of the overall design plan.

A cultural heritage resource assessment was carried out to identify built heritage values and cultural heritage landscapes within the study area. The Cultural Heritage Assessment Report (CHAR) is provided in **Appendix C**. Based on the Preferred Plan, the following summary is provided:

- ▶ None of properties identified as potentially being fully impacted are included on the City of London Inventory of Heritage Resources as listed or designated.
- ▶ One property, 596 Adelaide Street North – The Cat Hospital, is included on the City of London Inventory of Heritage Resources as a listed heritage property, Priority 1. The building will not be impacted; anticipated impacts are limited to the frontage of the property with changes to the existing access and landscaped garden.

Built cultural heritage resources will be reviewed once more in the context of the final design, and all appropriate documentation will be prepared to document potential impacts to heritage value.

### Preliminary Property Requirements

Municipal Address	Type	Nature of Impact
571 Adelaide Street N RN: 20120019000000	Residential	Partial impacts – very minor edge impacts to frontage. Approximate area = 19 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.

Municipal Address	Type	Nature of Impact
577 Adelaide Street N RN: 20120018000000	Residential	Partial impacts – minor edge impacts to frontage. Approximate area = 16.5 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
579 Adelaide Street N RN: 20120017000000	Residential	Partial impacts – minor edge impacts to frontage. Approximate area = 46 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
585 Adelaide Street N RN: 20120016000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 71.5 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
589 Adelaide Street N RN: 20120015000000	Commercial	Partial impacts – edge impacts to frontage. Approximate area = 97 m <sup>2</sup> Potential full removal due to road lowering and access restrictions for underpass grade separation and intersection improvements.
595 Adelaide Street N RN: 20130067000000	Commercial	Full removal due to road lowering for underpass grade separation and intersection improvements.
596 Adelaide Street N RN: 30130039000000	Commercial	Partial impacts – edge impacts to frontage and access. Approximate area = 26.5 m <sup>2</sup> Included on the City of London Inventory of Heritage Resources as a listed heritage property, Priority 1.
600 Adelaide Street N RN: 30130001000000	Commercial	Full removal due to road lowering for underpass grade separation and intersection improvements. Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
620 Adelaide Street N RN: 30780198000000	Commercial/ Industrial	Partial impacts – edge impacts to frontage. Approximate area = 520 m <sup>2</sup> Permanent easement required for utility corridor.
625 Adelaide Street N RN: 20130060000000	Commercial	Full removal due to road lowering for underpass grade separation and intersection improvements.
665 Adelaide Street N RN: 20130059000000	Commercial	Partial impacts – edge impacts to frontage along Adelaide Street. Approximate area = 479 m <sup>2</sup> Partial impacts to south end of main building on east side of property due to construction of retaining walls for underpass

Municipal Address	Type	Nature of Impact
		grade separation. Extent of impacts to be determined in detailed design in consultation with owner.
682-686 Adelaide Street N RN: 30150076000000	Commercial	Partial impacts – edge impacts to frontage and front entrance from sidewalk. Approximate area = 7.5 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but 686 Adelaide Street N identified as having potential heritage interest.
688 Adelaide Street N RN: 30150078000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 10 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
692 Adelaide Street N RN: 30150079000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 20.5 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
698 Adelaide Street N RN: 30150080000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 13.5 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
700 Adelaide Street N RN: 30150081000000	Residential	Partial impacts – edge impacts to frontage. Approximate area = 6.5 m <sup>2</sup> Not included on the City of London Inventory of Heritage Resources as a listed or designated heritage property, but identified as having potential heritage interest.
627 Central Avenue RN: 30130002000000	Residential	Full removal due to road lowering for underpass grade separation and intersection improvements.

## ES9 Consultation

Consultation is documented in **Chapter 7** of the Environmental Study Report. A Notice of Study Commencement for the project was issued in February 23, 2016. A project page on the City’s website was also launched at that time. Public feedback at the commencement of the study primarily related to CP operations, the need for a grade separation, cut-through traffic on residential streets, potential property and access

impacts, neighborhood connectivity, pedestrian and cyclist safety and potential for higher traffic volumes and noise.

As the owner of the railway, CP is an important project partner and will ultimately have approval of any proposed changes to their infrastructure. City staff have had ongoing communication with CP throughout the study.

There are four community and business associations with interest in the study area: Piccadilly Area Neighbourhood Association (PANA), Woodfield Community Association, and Old East Village Business Improvement Area (BIA) and Old East Village Community Association. Representatives from each these groups engaged City staff early in the study and have remained directly involved in the study process throughout. An initial meeting was convened with community representatives on May 24, 2016. A follow-up walking tour of the neighbourhood was held on October 6, 2016. A further meeting was convened on April 11, 2018 to review the proposed design, including the streetscape/ urban design concept in advance of Public Information Centre 3. The partnership with the community groups and business associations has been critical to the success of this EA the community associations have played a key role in raising the project profile and encouraging the broader community to participate in the study.

The first Public Information Centre (PIC) was held on June 16, 2016 and provided stakeholders with an opportunity to meet the project team, review the study scope, existing conditions, need and justification and planning alternatives. Approximately 140 people attended. Common verbal feedback heard at the PIC included:

- ▶ Change CP operations instead of constructing the grade separation;
- ▶ A grade separation is needed to alleviate traffic – strong preference for an underpass;
- ▶ Better pedestrian facilities are needed on Adelaide Street;
- ▶ Concern that an overpass will break up the neighbourhoods; and,
- ▶ Many cars cut through the neighbourhoods on the side streets when trains block Adelaide Street.

A comment sheet / questionnaire was provided at PIC 1 and posted on the City's website until August 31, 2016. A total of 125 comment sheets were received in this period. From the comment sheet / questionnaire, the highest rated issues were: travel delays due to frequent train crossing / road blockages; need for safe / comfortable sidewalks and cycling facilities; and improved air quality and noise. The most important

goals for the study, from the questionnaire, were to protect and improve pedestrian accessibility/walkability, develop a solution that contributes to a vibrant street and neighbourhood, ensure continued access to homes and businesses, and protect heritage value of neighbourhood.

Based on feedback received from the community associations and from the public at PIC 1, the project team's approach to public engagement was expanded to include one additional PIC / Workshop. This approach allowed the project team to better address the complex technical components of the study, respond to the high level of community interest and desire for direct involvement, and provide more opportunity for public input to the streetscape design to enhance the neighbourhood.

Public Information Centre 2 was held on December 14, 2016. The PIC consisted of a drop-in open house from 4:30 pm to 8:00 pm with a workshop component from 6:00 to 7:30 pm. The purpose of the PIC was to confirm the preferred planning solutions, describe the multi-step design process and present alternative design concepts (including grade separation type and side street connections), and actively develop a high-quality streetscape design through the Workshop. The workshop provided a more visual project interaction to gain feedback on specific elements such as sidewalk configuration, side treatments, pedestrian space, aesthetic and theming opportunities, and landscape design. Those not able to attend the workshop had an opportunity to provide input on these elements through the Engage London website. Approximately 60 people attended the PIC and almost all attendees participated in the workshop.

A comment sheet / questionnaire was provided at PIC 2 and posted on the City's website until January 31, 2017. A total of 26 written comments were received in this period. Common verbal and written feedback included:

- ▶ Strong preference for the underpass design;
- ▶ Understand the need for a grade separation but concern that it will separate the neighbourhoods;
- ▶ Concern about potential for increased noise associated with the grade separation and potentially higher traffic volumes on Adelaide Street;
- ▶ Suggestion for a signalized intersection at McMahan Street;
- ▶ Design for a friendly, safe, and secure space for pedestrians;
- ▶ Preference for dedicated bicycle lanes;
- ▶ Concern regarding property impacts;

- ▶ Concern for disruption to local businesses during construction; and
- ▶ Maintain the connection at Pall Mall Street and Adelaide Street.

Public Information Centre 3 was held on April 26, 2018. The purpose of this PIC was to review the community feedback received through PIC 2 and the Workshop, review the assessment of alternative design concepts for the grade separation, local street connections, new utility corridor and temporary road detour, present the Recommended Plan including Streetscape Design Concept, present the preliminary construction staging concept and overall implementation timeframes. Approximately 100 people attended. A total of 57 written comments were received in this period. Common verbal and written feedback included:

- ▶ Strong support for the underpass design;
- ▶ Very positive feedback for the streetscape design;
- ▶ Positive feedback on the design of the Central Avenue intersection;
- ▶ Community 'feels they have been heard' and design is reflective of the community feedback given during the study;
- ▶ Questions regarding the timing of the design and construction; support for construction commencing 'right away';
- ▶ Some concern about temporary loss of use of parts of McMahan Park during construction but support for park revitalization post-construction; and
- ▶ Some concern about potential for traffic infiltration to neighbourhoods and interest in providing traffic calming during construction.

## **ES10 Construction Staging**

The project is expected to be implemented in a 3 to 5-year timeframe. Construction timing is subject to the completion of the Environmental Assessment process, property acquisition and CP concurrence. Due to the complexity of the project, the construction duration is expected to be approximately 24 to 28 months.

The project is a complex undertaking that involves numerous stages of construction including: bridge construction within CP technical and scheduling constraints; lowering of Adelaide Street by 6.5 m; intersection and road reconstruction; lowering of the Central Avenue intersection by 1.5 m; relocation and upgrade of existing municipal services, installation of new services, and construction of a pumping station; and relocation of major utilities to a new corridor.

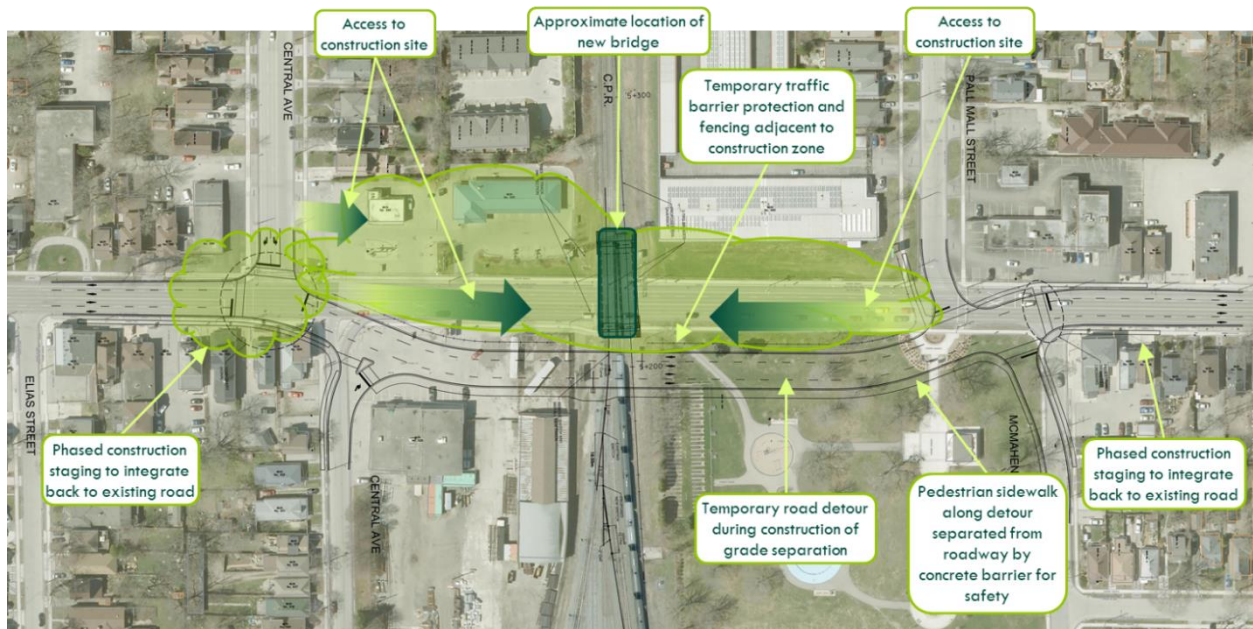


The project team has been sensitive to the potential impacts of construction on local businesses and the community. It is proposed that a temporary road detour be provided around the construction area to minimize the duration of closure periods.

Most of the underpass construction can be completed 'off-line' with traffic routed around the construction area via the temporary road detour. Details of the construction staging will be refined during design phase of the project. Construction timing, duration, staging and traffic management will be fully developed during the future detailed design phase. It is anticipated that some construction activities will require short-term periodic lane closures or temporary lane reductions, for example:

- ▶ Relocation and installation of utilities and municipal services will involve short-term closures or lane reductions to through-traffic. Local streets will remain open to local traffic. A number of weekend closures will be required at intersections to complete utility crossings.
- ▶ Modifications to rail infrastructure will involve short-term closures to Adelaide Street (possible weekend closures).
- ▶ Longer closure / lane reduction to through-traffic will occur with the lowering of Adelaide Street to match the underpass road profile. Ideally this work will be planned during a single 4 to 6-week closure period on Adelaide Street. Local street traffic and walk-in access to businesses can likely continue via local streets during this period.
- ▶ Once Adelaide Street is lowered, it will be reopened to traffic. Local streets will then be lowered to match the new grade, with localized short-term closures.

## Conceptual Construction Staging Plan with Detour



In the upcoming detailed design phase, the project team will take a proactive approach in direct discussions with affected property / business owners. The detailed design involves the spatial arrangement of all construction aspects and the detailed scheduling that will allow for efficiencies to be identified. The detailed construction plan and schedule will incorporate all utility relocations, municipal service upgrades and all aspects of the bridge and road works. The construction plan will inform the development of a traffic management plan including scheduling and duration of lane restrictions and full closures. This information will facilitate more meaningful discussion with and provide more certainty to property and business owners. The final design, construction staging and traffic management plan will be shared with the community at a public meeting, during the detailed design phase, and will be posted on the City's website for easy access.

## ES11 Preliminary Cost Estimates

A preliminary construction cost for the Adelaide Street North grade separation is approximately \$58.3 M. The cost estimate includes roadway construction, the railway grade separation bridge structure, CP railway infrastructure costs (i.e., yard modifications, flagging, etc.), municipal services and utility relocation, temporary road detour, traffic and pedestrian signals, pump station with storage facility, landscaping, staging, and property acquisition. The preliminary estimate for the project is

summarized below and this value will be used to update future capital budgets. Costs are in 2017 dollars. Cost sharing with CP is anticipated.

Item	Estimated Cost
Removals	1,139,000
Roadwork	10,826,000
Storm Sewers / Pump Station	8,779,000
CP Structure	9,832,000
Sanitary Sewer	567,000
Watermain	876,000
Temporary Work	660,000
Road Detour	2,027,000
Utility Relocation	4,440,000
CP Railway Infrastructure Costs	4,080,000
Property Acquisition	9,800,000
Engineering	5,250,000
<b>TOTAL</b>	<b>58,276,000</b>