

## **Don Mills Crossing Environmental Assessment & Eglinton Crosstown Wynford Stop Pedestrian Access**

**Date:** June 18, 2021

**To:** Infrastructure and Environment Committee

**From:** General Manager, Transportation Services

**Wards:** Ward 16 – Don Valley East

### **SUMMARY**

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The Don Mills Crossing area at Don Mills Road and Eglinton Avenue East is planned to be transformed into a new complete community with a mix of housing structured around a connected public realm and open space system, community facilities, additional employment uses and connections to the ravine system. The anticipated growth (approximately 16,000 new residents and 9,000+ jobs) and intensification in the area creates a need for new transportation infrastructure to enhance the existing multi-modal network that accommodates people of all ages and abilities.

Transportation Services has completed a Municipal Class Environmental Assessment (EA) study to identify the preferred design and develop a functional design for a new active transportation grade-separated rail crossing in the area northwest of the intersection of Don Mills Road and Eglinton Avenue East. The recommended preferred design consists of a steel I-girder bridge with elevated ramps and a staircase to connect people walking and cycling between the Don Mills Trails to the north of the rail corridor to the proposed community and ravine and trail system to the south.

This EA study completes phases 3 and 4 of the Municipal Class EA process. The recommended preferred design emerged through a comprehensive comparative evaluation of alternative designs and has been developed to a functional level of design. The Don Mills Crossing Mobility Plan Study completed phases 1 and 2 of the EA process in 2019.

There is an agreement between the City and the landowners of 844 Don Mills Road and 1155 Eglinton Avenue East, secured under Section 37 of the *Planning Act*, for the landowners to complete detailed design and construct the bridge before conveying the bridge to the City. As part of this agreement, the City and landowners will share the cost of construction, each contributing approximately 50% of the cost with the landowners' share capped at \$4,000,000. The City's share will be secured by Transportation

Services through a subsequent report to request funding as part of the division's Capital Budget and Plan.

In addition to recommending the preferred design for the Don Mills Crossing EA study, this report also provides an update on improvements to pedestrian access to the Eglinton Crosstown Light Rail Transit (LRT) - Wynford Stop in the nearby area. At the request of Infrastructure and Environment Committee, Transportation Services, in consultation with Toronto Transit Commission (TTC), reviewed options to improve pedestrian access to and from the future Wynford Stop which will be located on Eglinton Avenue East, on the west side of the bridge over Wynford Drive. As a result, a new sidewalk is planned alongside the ramp connecting Wynford Drive and Eglinton Avenue East at the northeast quadrant, to be completed in advance of the Eglinton Crosstown Light Rail Transit opening.

## **RECOMMENDATIONS**

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The General Manager, Transportation Services recommends that:

1. City Council endorse the recommended preferred alternative design for the Don Mills Crossing active grade-separated crossing over the CPR rail corridor, as described in Attachment 2 to the report (June 18, 2021) from the General Manager, Transportation Services.
2. City Council authorize the General Manager, Transportation Services to issue a Notice of Study Completion and file the Environmental Study Report on the public record for a minimum of 30 days, in accordance with the requirements of the Municipal Class Environmental Assessment process.

## **FINANCIAL IMPACT**

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A preliminary capital cost estimate of between \$8,000,000 and \$8,300,000 has been identified for the recommended preferred design. The Section 37 Agreement for the redevelopment of 844 Don Mills Road and 1155 Eglinton Avenue East includes cost sharing provisions for the bridge.

The landowners will contribute 50% of the capital cost to an upset limit of \$4,000,000 and the City will contribute the remainder through Transportation Services' Capital Budget and Plan. Funding is not currently identified in Transportation Services' approved 2021-2030 Capital Budget and Plan. Following Council endorsement of the recommendations within this report, Transportation Services will move to secure funding as part of a future capital budget process. All costs associated with completion of a detailed design will be the responsibility of the landowners.

The estimated cost to construct the sidewalk recommended in this report is \$100,000. Funding is available within the approved 2021-2030 Capital Budget and Plan for Transportation Services in account CTP419-01 RSP Missing Link Sidewalks.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

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At its meeting on November 25 and 26, 2020, City Council requested Transportation Services and the TTC to explore options to encourage and improve pedestrian access to the Wynford Drive station of the Eglinton Crosstown LRT.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE17.8>

At its meeting on April 16, 2019, City Council adopted the Don Mills Crossing Secondary Plan, a comprehensive planning framework for the lands surrounding the intersection of Don Mills Road and Eglinton Avenue East to support redevelopment in the area and leverage the significant public investment into new transit service including the Crosstown LRT. To support the policies in the Secondary Plan, a Mobility Plan Study (MPS) was completed to provide a mobility framework for future redevelopment. The MPS identified several key transportation improvements for the area including a grade-separated active transportation crossing for pedestrians and cyclists over the CP rail corridor at the northwest quadrant of the intersection.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.PH4.1>

At its meeting on June 26, 27, 28, and 29, 2018, City Council authorized the Section 37 provisions related to the active transportation rail crossing, including the cost-sharing agreement secured between the City and the landowners of 844 Don Mills Road and 1155 Eglinton Avenue East for the construction of the grade-separated rail crossing.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.PG30.7>

## **COMMENTS**

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### **Study Area**

The study area for the active transportation grade-separated crossing is generally illustrated in Figure 1. The study area is located in the northwest quadrant of Don Mills Road and Eglinton Avenue East adjacent to the CP rail corridor and planned redevelopment of 844 Don Mills Road and 1155 Eglinton Avenue East, referred to in this report as the Crosstown development. The Crosstown development area is approximately 24 hectares in area and will be a new mixed-use, transit-supportive community.

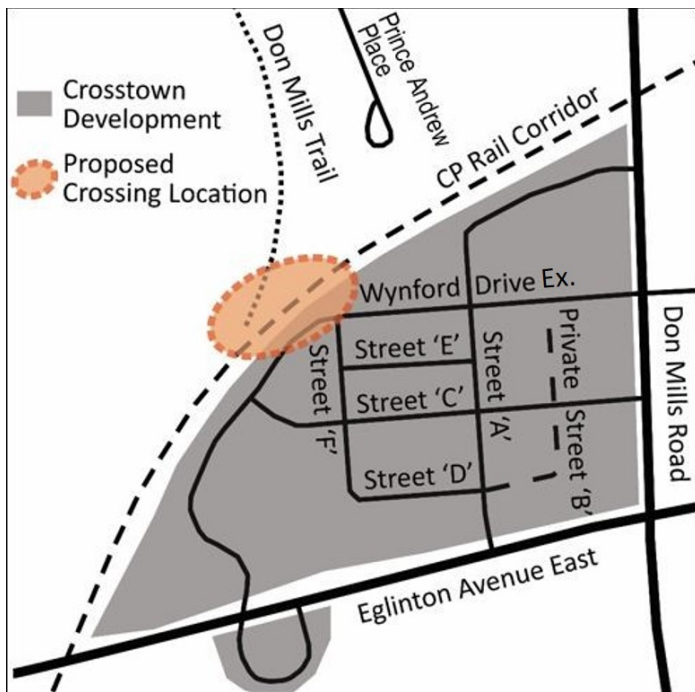


Figure 1: Study Area

Don Mills Road and Eglinton Avenue East serve as arterial roads that carry significant traffic volumes, especially due to their proximity to the Don Valley Parkway. Currently the study area currently exhibits poor connectivity for active modes of travel - the Don Mills Trail to the north terminates at the rail corridor with no connection to new planned transit services, public amenities, and natural areas to the south. Major natural and engineered barriers contribute to the lack of connectivity for the active transportation network within the study area. These barriers include the rail corridor, the Don Valley Parkway, and the Don Valley ravine.

### **Don Mills Crossing: Mobility Plan Study and Secondary Plan**

In 2019, City Planning completed a Transportation Master Plan referred to as the Don Mills Crossing Mobility Plan Study (MPS) to support and inform policies in the Don Mills Crossing Secondary Plan. The MPS identified a transportation mobility framework for the Crosstown development lands and surrounding lands adjacent to the intersection of Don Mills Road and Eglinton Avenue East. The MPS set a vision for a complete, connected multi-modal transportation network that addresses existing deficiencies and supports intensification. A network of new local and collector streets was identified, including new pedestrian and cycling infrastructure as illustrated in Figure 2.

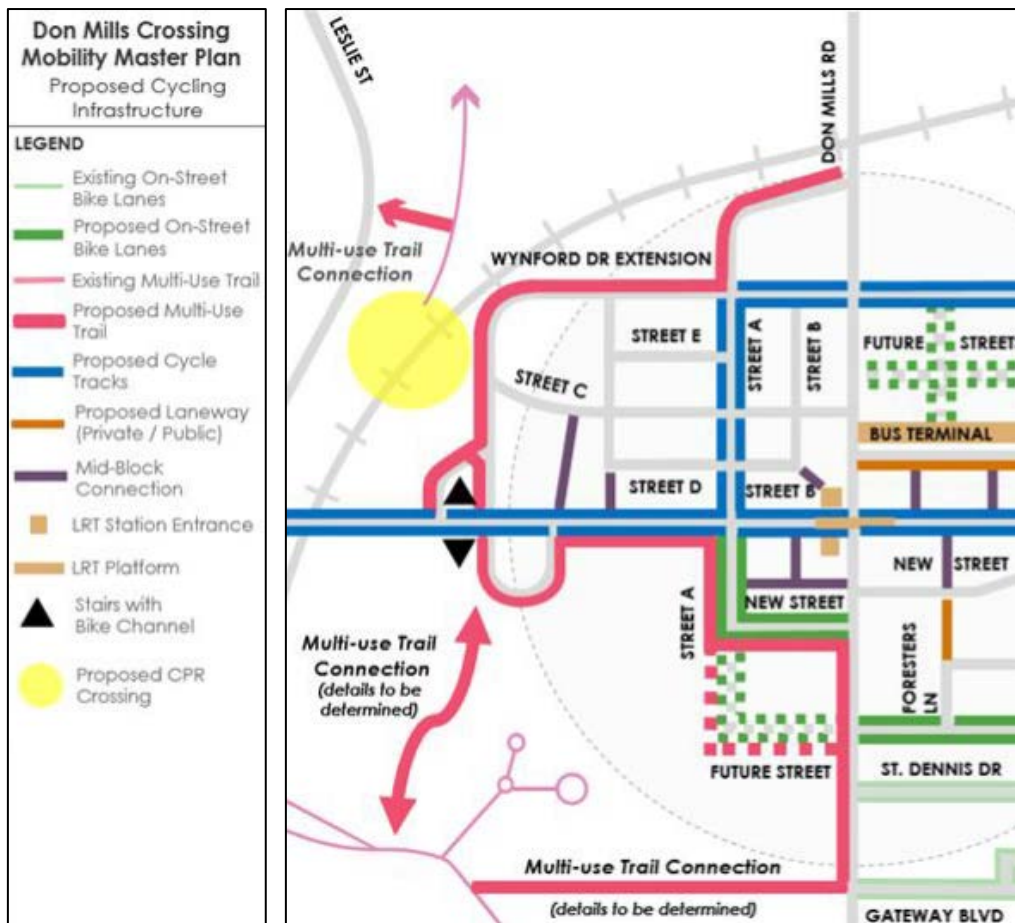


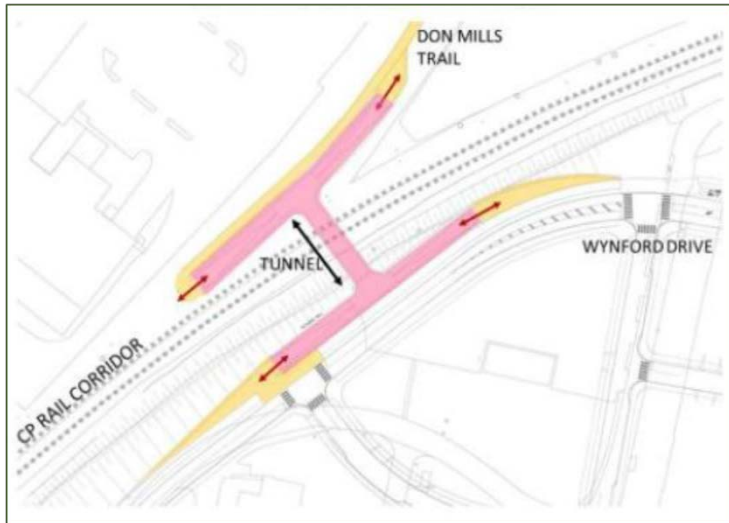
Figure 2: MPS Recommended Transportation Network

The proposed grade-separated rail corridor crossing for people walking and cycling was a key recommendation of the MPS. The MPS further recognized value in a future connection westward from the Don Mills Trail to Leslie Street. Transportation Services anticipates this connection could be secured over time through the development approvals process.

The MPS was prepared in accordance with the requirements of phases 1 and 2 of the EA process. A variety of alternative solutions were developed and comparatively evaluated using a comprehensive set of criteria. Each alternative was assessed for potential impacts to the natural, cultural, and socio-economic environments, and for safety, accessibility, public realm, maintenance, and cost. Two alternative solutions were considered for the rail corridor crossing: an underground tunnel and an elevated bridge with straight or switchback ramps, as shown below in Figure 3. Key considerations in the planning, design, and evaluation of the crossing alternatives included recognition of challenging grades that contribute to accessibility, security, and visibility issues, as well as maintenance requirements and cost.

The preferred solution from the MPS was an elevated bridge. The MPS determined that an underpass was not preferable as a result of safety, drainage, and maintenance concerns. There were also challenges identified in integrating an underpass ramp with the design of the Wynford Drive extension.

## Tunnel



## Bridge (switchback ramps)



## Bridge (straight ramps)

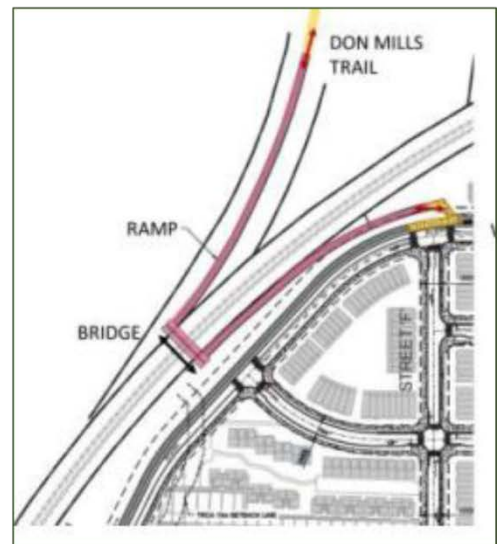


Figure 3: MPS Alternative Solutions

## Alternative Designs

As part of this current phase of study, the project team reviewed the recommendations from the MPS and confirmed that an elevated bridge continues to be the preferred solution for the development of alternative designs. The alternative designs developed during phase 3 of the EA consisted of two categories of alternatives, listed below and as shown in Attachment 1. A preferred alternative within each of the two categories was then selected to identify the overall preferred design for the bridge. Additionally, elements related to improving user experience (shared multi-use trail or separated pedestrian and cycling facilities, and additional connectivity) was also addressed as part of the alternative design development.

### A) Structural Bridge Alternatives

1. Steel I-girder
2. Precast concrete box girder

### 3. Steel truss

#### B) Structural Ramp Alternatives

1. Elevated ramps on piers (concrete solid slab)
2. Elevated ramps on piers (steel girders)
3. Retained soil system wall-supported ramp

#### **Alternative Evaluation: Methodology, Criteria, and Findings**

The evaluation criteria used to identify the preferred design were based on requirements of the EA process, and the key objectives and principles of the MPS, Secondary Plan, and the City of Toronto Official Plan. The evaluation criteria is listed below:

##### Natural Environment

- Impact to adjacent TRCA lands
- Impact to existing vegetation and tree cover
- Opportunity for enhancement of natural heritage features

##### Socio-Economic Environment

- Conformity to Official Plan, Secondary Plan, and MPS
- Conformity to City's Complete Streets policies and objectives
- Conformity with applicable provincial and federal regulations and approvals
- Impacts to private property

##### Cultural Environment

- Impacts to archaeology or built heritage resources

##### Accessibility

- Opportunity to create direct routes to destinations within larger network
- AODA compliance
- Consideration for all types of cycling and mobility devices
- Continuity with adjacent facilities, including existing and planned trails
- Ease of use of crossing and crossing approach

##### Public Realm

- Opportunity for landscaping adjacent to ramps and bridge
- Opportunity to create public space adjacent to ramps and bridge
- Opportunity for view from bridge and ramps
- Opportunity for rest on the bridge and ramps
- Visual impacts to adjacent property

##### Safety

- Consideration of Crime Prevention Through Environmental Design (CPTED)
- Consideration for pedestrian-scale lighting
- Potential for cyclist and pedestrian conflicts on the bridge structure and ramp landing points
- Potential for vandalism and graffiti

## Maintenance

- Ease of maintenance
- Winter maintenance operations

## Cost

- Capital cost
- Lifecycle cost and service life
- Impacts to utilities

Each alternative was evaluated using a 5-level scale from least preferred to most preferred using a set of measures corresponding to each criteria. A summary of the evaluation of the alternatives is included in Attachment 1 of this report.

## **Recommended Preferred Design**

A recommended preferred design emerged following the comparative evaluation and selection of preferred design elements for the bridge, ramps, and connections to the planned Street 'C' as part of the Crosstown development street network. The recommended preferred design consists of a steel I-girder structure forming both the 24.5m long bridge crossing and the 200m long ramps on both side of the CP rail tracks. Conceptual renderings of the recommended preferred design are included in Attachment 2.

The recommended preferred design best meets the evaluation criteria and was supported through public and stakeholder feedback received. It provides a fully accessible active transportation crossing that will support this growing community, and a key transportation improvement identified in the MPS and Secondary Plan to address the existing discontinuous transportation network.

### *Bridge*

The 24.5m long and 6.1m wide bridge is a single span structure supported by 3 steel I-girders spaced approximately 2m apart. An 8m vertical clearance over the CP rail tracks will be maintained. The superstructure will be at a depth of 1.13m.

### *Ramps*

The 200m long ramps provide a fully accessible means to utilize the bridge. A maximum slope of 5% and 15m long flat landing areas are identified. The ramps will be supported by a concrete slab on piers spaced 20m apart. A 1m overhang over the superstructure where the ramps meet the bridge is proposed to provide users with a rest spot and viewing area.

Straight ramps are recommended rather than switchback ramps primarily due to property constraints on both sides of the rail corridor. To be fully accessible, a 5m radius would be needed at the switchback and the study determined that this would cause the ramps to encroach onto the planned extension of Wynford Drive.



*User Experience*

The recommended preferred design includes shared pedestrian and cycling space on the bridge and north ramp to connect to existing shared Don Mills Trail and separated pedestrians and cyclist facilities along Wynford Drive. A staircase on the east side of the rail corridor is also included which will provide an additional connection point to the bridge, as shown below in Figure 4. The bridge itself will cross the rail corridor at the approximate location where the planned Wynford Drive extension will intersect with the planned Street 'C' as part of the Crosstown development street network. Without this staircase, people trying to access the bridge from this future intersection would need to travel north approximately 200m up a steep grade to the ramp landing area and then travel another 200m.

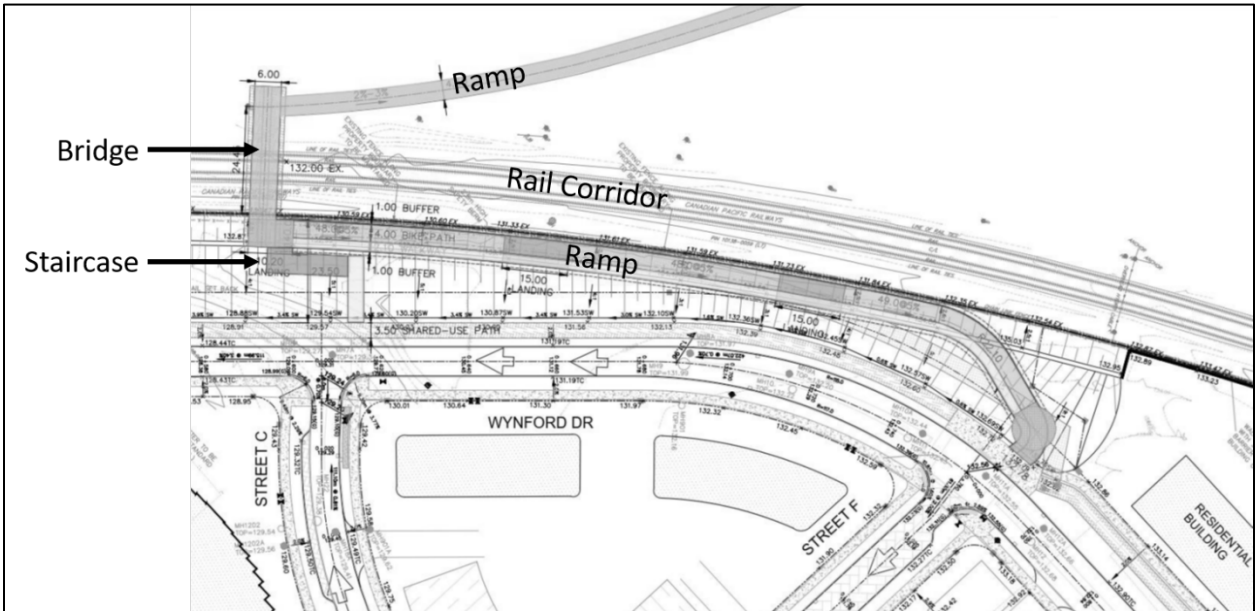


Figure 4: Preferred Design Plan View

Space constraints prevent a switchback ramp at this location, and the staircase is a reasonable approach to mitigate this issue. Further enhancements can be considered during the detailed design of the bridge, such as inclusion of bike channels on the staircase.

*Future Considerations*

The recommended preferred design was developed to a functional level of design that enabled parameters to be identified for the detailed design phase. As such, dimensions described herein should be understood as approximate and subject to refinement in the detailed design phase. Future considerations for the bridge will include integration of public art and public realm improvements, signage and wayfinding, lighting, landscaping, and the treatments of the ramp landing areas and how they will integrate into adjacent trails.

A connection from the west side of the bridge from the Don Mills Trail west to Leslie Street was also reviewed. Currently, Don Mills Trail terminates at the approximate location of the future bridge and trail users access Leslie Street using an unassumed path through privately owned land that is not maintained by the City. It is anticipated that

a future trail connection to Leslie Street can be secured through the development approval process. During detailed design of the bridge, further consideration will be given to this future connection.

### **Design Review Panel**

On July 16, 2020, the project was presented to the City's Design Review Panel for early input. Staff from Transportation Services and City Planning introduced the alternative designs considered, their evaluation, and a preliminary preferred design. The Panel was supportive of the overall plan and design, including the bridge concept with long ramps and additional staircase. The Panel cautioned the project team against developing too far beyond a functional design. It was recommended that aesthetic and landscape design elements be developed more completely during the detailed design phase of the project following completion of the EA process. They also recommended that the project return to the Panel during detailed design for review and comment.

### **Public Consultation**

Public involvement is an integral part of the EA process. Public consultation on the alternative designs and recommended design was carried out online through the project's webpage ([toronto.ca/DonMillsCrossingBridge](http://toronto.ca/DonMillsCrossingBridge)) due to the ongoing COVID-19 pandemic. Information was posted on the project's website for public review and input.

Approximately 11,000 notices were mailed to residents within a 1km radius of the study area. Notices were also sent via email to the existing contact lists from the Don Mills Crossing Secondary Plan study, agency and utility contact lists, and other city-wide active transportation and rail stakeholders. Notices to Indigenous communities were provided to the Mississaugas of the Credit First Nation, Six Nations of the Grand River, and the Huron-Wendat Nation.

#### *What We Heard*

Generally, there was popular support for the bridge. There were questions about the rationale for the recommended preferred design and plans to further enhance the local trail and cycling network. Several questions were posed about whether this study includes the provision of a new trail connection from Leslie Street to the Don Mills Trail on the west side of the rail corridor.

Feedback included a range of design suggestions which will be carried forward into the detailed design process. These suggestions included further consideration for how cyclists and pedestrians will be separated, how the bridge design can be optimized to improve winter maintenance, provide seating where possible, and to ensure that the ramp interfaces with Don Mills Trail and Wynford Drive are safe.

A full public consultation summary report will be included as part of the final Environmental Study Report prepared for this study and posted on the public record.

## **Implementation and Next Steps**

Subject to City Council's adoption of the recommendations in this report, the Environment Study Report (ESR) will be prepared and filed on the public record for a minimum 30-day review period. During this period, questions or concerns can be directed to the City, and any interested party may request to the Ministry of the Environment, Conservation and Parks issue a Part II Order under the Environmental Assessment Act only with respect to preventing, remedying or mitigating impacts on existing aboriginal and treaty rights of aboriginal peoples. The project may proceed to implementation following the completion of the 30-day review period if no Part II Order is granted.

The Section 37 Agreement with the landowners of 844 Don Mills Road and 1155 Eglinton Avenue East requires the landowners to complete the detailed design and construction of the rail crossing.

Following Transportation Services' approval of the detailed design and the City securing funding for its share of construction, the landowners will construct the rail crossing to the satisfaction of the City. The City will be required to enter into agreements with CP Rail for the purposes of constructing and maintaining the crossing. Construction is anticipated to occur within two years following Transportation Services' approval of the detailed design and funding being secured through the City's Capital Budget process.

## **Eglinton Crosstown - Wynford Stop Pedestrian Access**

On November 25, 2020, City Council requested that Transportation Services, in consultation with Toronto Transit Commission (TTC), review options to improve pedestrian access to the Wynford Stop of the Eglinton Crosstown LRT.

The Wynford Stop will be located on Eglinton Avenue East on the west side of the bridge over Wynford Drive. The densely populated area to the northeast of Wynford Drive (accessed from Wynford Heights Crescent) and southeast of St Dennis Drive (accessed from Edgecliff Golfway) are within a 10 minute walking distance but would require use of the stairs to access the Wynford Stop. The stairs pose a barrier to those who use a mobility aid or stroller.

As a result, a new sidewalk is planned alongside the ramp connecting Wynford Drive and Eglinton Avenue East at the northeast quadrant. Engineering design work for the new sidewalk is planned to start this summer, with construction aimed to be completed in advance of the Eglinton Crosstown Light Rail Transit opening.

## **CONTACT**

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## **SIGNATURE**

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Barbara Gray  
General Manager, Transportation Services

## **ATTACHMENTS**

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Attachment 1: Alternatives Considered and Alternative Evaluation  
Attachment 2: Recommended Preferred Design

## ATTACHMENT 1: ALTERNATIVES CONSIDERED AND ALTERNATIVE EVALUATION

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### Structural Bridge Alternatives

#### 1. *Steel I-Girder Bridge*

- Single span structure
- 3 girders, 2m spacing
- Superstructure depth of 1.13m
- 1m overhang

#### Aesthetics:

- 1m overhang provides shadows to enhance slenderness
- Discoloration of ACR steel contrasts with concrete deck
- Open steel railing enhances superstructure slenderness
- Can accommodate utilities between girders without increasing depth

#### Maintenance:

- Bottom flanges of girders can encourage bird roosting & debris build-up
- Medium maintenance level required

#### Cost Estimate:

- \$1 – 1.1 million

#### Example:

- Pine Valley Pedestrian Bridge, Vaughan, ON



#### 2. *Pre-cast Concrete Box Girder*

- Single span structure
- 4 concrete boxes, girders side-by-side

- Superstructure depth of 0.95m
- 0.56 m overhang

Aesthetics:

- Material is uniform
- Open steel railing enhances superstructure slenderness
- Less overall superstructure depth provides cleaner, streamlined appearance

Maintenance:

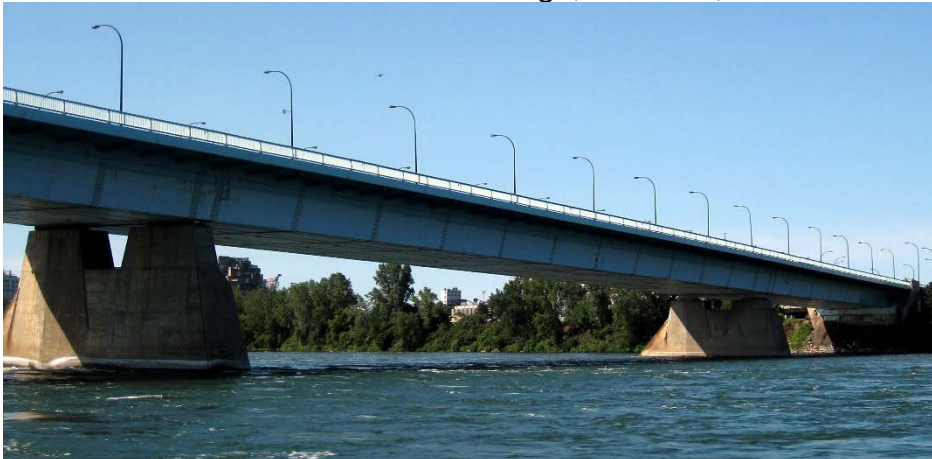
- Corrosion in concrete box can be minimized by no direct exposure to de-icing salts and other chemicals
- Low maintenance level required

Cost Estimate:

- \$1 – 1.1 million

Example:

- Place de la Concorde Pedestrian Bridge, Montreal, QC



3. *Steel Truss*

- Single span structure
- Supported by 4.5 m truss
- Superstructure depth of 0.68m
- No overhang

Aesthetics:

- No overhang
- Discoloration of ACR steel contrasts with concrete deck
- Open steel railing enhances superstructure slenderness
- Joint connections can affect aesthetic qualities

Maintenance:

- Exposed steel bracings & connections encourage bird roosting and debris build-up
- High maintenance level required

Cost Estimate:

- \$1.2 – 1.3 million

Example:

- New Creemore Bridge, Clearview Township, ON



## Structural Ramp Alternatives

### 1. *Elevated Ramp on Piers (Concrete Solid Slab)*

- 0.3m concrete slab supported on piers with 9m spacing

Constructability & Access:

- Deeper excavation required to lay footing
- Falsework for piers

Aesthetics:

- Visually open with spacing between piers

Maintenance:

- Deck may exhibit signs of deterioration (may require maintenance)

Cost Estimate:

- 6.1m wide: \$5.2 – 5.3 million
- 4.1m wide: \$4.2 – 4.3 million

Example:

- Garrison Crossing Pedestrian & Cyclist Bridge, Toronto, ON



## 2. Elevated Ramp on Piers (Steel Girders)

- 0.175m concrete slab supported on piers with 20m spacing

### Constructability & Access:

- Deeper excavation may be required to lay footing
- Less falsework needed compared to concrete slab piers

### Aesthetics:

- Visually open – can accommodate utilities between piers w/o increasing depth
- Less efficient at accommodating curvature than other options

### Maintenance:

- Deck may show signs of deterioration – requires maintenance, incl. bearings

### Cost Estimate:

- 6.1m wide: \$6.5 – 6.7 million
- 4.1m wide: \$4.9 – 5.1 million

### Example:

- Flora Footbridge, Ottawa, ON





### 3. RSS Wall Supported Ramp

- 0.25m concrete slab with continuous RSS wall supporting grade change

#### Constructability & Access:

- Shallow excavation and modular installation
- No falsework required

#### Aesthetics:

- Significant visual impact to landscape

#### Maintenance:

- Maintenance-free structure, however largest potential for graffiti

#### Cost Estimate:

- \$8.8 – 9 million

#### Example:

- Comparing RSS walls with basic vs. enhanced aesthetics



## Bridge Evaluation



	1. Steel I-Girder	2. Precast Concrete Box Girder	3. Steel Truss
➤ <b>Socio-Economic</b>	● • Conform with City objectives; minimizes property impacts	● • Conform with City objectives; minimizes property impacts	● • Conform with City objectives; minimizes property impacts
➤ <b>Cultural Environment</b>	● • No archaeology impacts; 'steel ribbon' reflects industrial character	◐ • No archaeology impacts; doesn't reflect cultural heritage	● • No archaeology impacts; truss reflects industrial character
➤ <b>Accessibility</b>	● • All cyclists and mobility devices can be accommodated	● • All cyclists and mobility devices can be accommodated	● • All cyclists and mobility devices can be accommodated
➤ <b>Public Realm / Aesthetics</b>	● • Steel overhang enhances slenderness ● • Steel contrasts with concrete deck	◐ • Uniform concrete material ● • Minimal design variation	◐ • Steel truss offers visual variety ● • Impacts adjacent building view
➤ <b>Natural Environment</b>	◐ • Requires some tree removal	◐ • Requires some tree removal	◐ • Requires some tree removal
➤ <b>Safety</b>	◐ • Opportunities for lighting ● • Some opportunity for graffiti	◐ • Opportunities for lighting ● • Some opportunity for graffiti	◐ • Opportunities for lighting ● • Some opportunity for graffiti
➤ <b>Maintenance</b>	◐ • Moderate maintenance required	◐ • Low maintenance required	◐ • Significant maintenance required
➤ <b>Cost</b>	● • Lower cost	● • Lower cost	○ • Highest cost



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## Ramp Evaluation



	1. Elevated on Piers (Concrete Solid Slab)	2. Elevated on Piers (Steel I-Girder)	3. RSS Wall-Supported
➤ <b>Socio-Economic</b>	● • Conform with City objectives; minimizes property impacts	● • Conform with City objectives; minimizes property impacts	● • Conform with City objectives; minimizes property impacts
➤ <b>Cultural Environment</b>	● • Minimal impacts to archaeology or heritage resources	● • Minimal impacts to archaeology or heritage resources	● • Minimal impacts to archaeology or heritage resources
➤ <b>Accessibility</b>	● • All cyclists and mobility devices can be accommodated	● • All cyclists and mobility devices can be accommodated	● • All cyclists and mobility devices can be accommodated
➤ <b>Public Realm / Aesthetics</b>	◐ • Visually open ● • Significant concrete visible	● • Most visually open ● • Continuous 'steel ribbon'	◐ • Not visually open ● • Significant impacts to landscape
➤ <b>Natural Environment</b>	◐ • Requires some tree removal	◐ • Requires some tree removal	◐ • Requires some tree removal
➤ <b>Safety</b>	◐ • Opportunity for graffiti (CPTED)	● • Least opportunity for graffiti (CPTED)	◐ • Greatest opportunity for graffiti (CPTED)
➤ <b>Maintenance</b>	◐ • Moderate maintenance required to mitigate deterioration	◐ • Moderate maintenance required to mitigate deterioration	◐ • Less structural maintenance ● • Some aesthetic maintenance
➤ <b>Cost</b>	● • Lowest cost	◐ • Moderate cost	○ • Highest cost

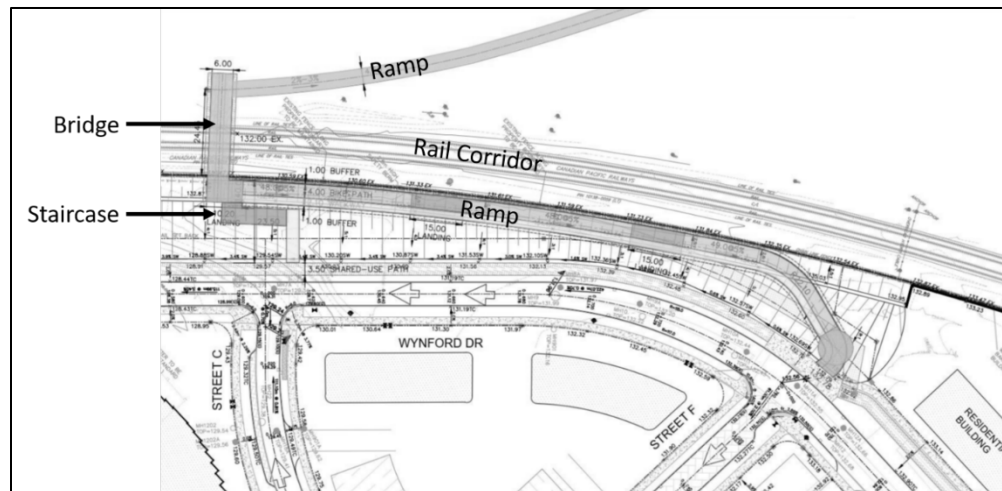


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## ATTACHMENT 2: RECOMMENDED PREFERRED DESIGN

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### Summary of Preferred Design



- The recommended preferred design consists of a steel I-girder structure forming both the 24.5 metre (m) long bridge crossing and the 200m long ramps on both side of the CP rail tracks.
- The 24.5m long and 6.1m wide bridge is a single span structure supported by 3 steel I- girders spaced approximately 2m apart. An 8m vertical clearance over the CP rail tracks will be maintained. The superstructure will be at a depth of 1.13m.
- The 200m long ramps provide a fully accessible means to utilize the bridge. A maximum slope of 5% and 15m long flat landing areas are identified. The ramps will be supported by a concrete slab on piers spaced 20m apart. A 1m overhang over the superstructure where the ramps meet the bridge is proposed to provide users with a rest spot and viewing area.
- The recommended preferred design includes shared pedestrian and cycling space on the bridge and north ramp to connect to existing shared Don Mills Trail and separated pedestrians and cyclist facilities along Wynford Drive. A staircase on the east side of the rail corridor is also included which will provide an additional connection point to the bridge. The bridge itself will cross the rail corridor at the approximate location where the planned Wynford Drive extension will intersect with the planned Street 'C' as part of the Crosstown development street network.
- The recommended preferred design was developed to a functional level of design that enabled parameters to be identified for the detailed design phase. As such, dimensions described herein should be understood as approximate and subject to refinement in the detailed design phase.

**Conceptual Renderings**

*Conceptual aerial view, looking south*



*Conceptual view from Wynford Drive at Street 'C', looking west*



*Conceptual view from Wynford Drive, looking southwest*



*Conceptual view from on top of bridge, looking southeast*

