
TO: MAYOR J. LEHMAN AND MEMBERS OF COUNCIL

FROM: R. SUTTON, P. ENG., DIRECTOR OF ENGINEERING

**NOTED: R. FORWARD, MBA, M.SC., P. ENG.,
GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT**

M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

**RE: METROLINX BARRIE RAIL CORRIDOR EXPANSION PROJECT – TRANSIT PROJECT
ASSESSMENT PROCESS
(FILE: T03-GO)**

DATE: SEPTEMBER 18, 2017

The purpose of this Memorandum is to brief members of Council on the Metrolinx Barrie Rail Corridor Expansion (BRCE) Transportation Project Assessment Process. Metrolinx has advertised the Notice of Study Completion on August 9th, 2017 initiating a 30-day public review period. Additional details on the project can be found on the Metrolinx webpage (http://www.metrolinx.com/en/regionalplanning/rer/rer_barrie.aspx).

Background

Presently, Metrolinx operates five (5) southbound and seven (7) northbound commuter train trips on the Barrie Rail Corridor. As part of the Metrolinx plan to increase service levels to include peak period, peak direction 30-minute service and off-peak two-way 60 minute service with consideration of further service level increases, Metrolinx has identified the need to expand the Barrie Rail Corridor to include a second track and associated GO Station improvements.

Metrolinx initiated the BRCE study to evaluate the environmental effects of the expansion of the rail corridor in accordance with the Transit Project Assessment Process (TPAP). Recommendations include the following infrastructure components:

- A second track between Lansdowne Avenue in the City of Toronto to Allandale Waterfront GO Station in the City of Barrie;
- Upgrades at existing GO Stations along the corridor: Rutherford, Maple, King City, Aurora, Newmarket, East Gwillimbury, Bradford West Gwillimbury, Barrie South and Allandale Waterfront;
- Upgrades to existing structures within the Barrie rail corridor including bridges and culverts;
- A new layover facility within Bradford West Gwillimbury for overnight storage of trains; and
- Potential electrification of the entire Barrie rail corridor (electrification is being assessed under a separate TPAP).

The BRCE Project will be implemented in two phases. Subject to additional future funding and ridership demand, the second phase of the BRCE Project will include the second track between Aurora GO Station and Allandale Waterfront GO Station and associated station upgrades.

As part of the BRCE Project, the following service level scenarios were studied to assess impacts against the existing conditions/service level:

- Current: 14 diesel trains per day from Union Station to Allandale Waterfront GO Station in 2016;

- Future Scenario 1: up to 36 diesel trains per day from Union Station to Aurora GO Station by 2021, which includes 20 diesel trains between Aurora and Allandale Waterfront GO Station; and
- Future Scenario 2: up to 180 electric trains per day from Union Station to Aurora GO Station in 2025 and beyond, which includes 46 electric trains between Aurora and Allandale Waterfront GO Station.

The BRCE Project assessed effects on the natural and built environment for corridor widening, station improvements and increased service levels. The following sections provide a brief overview of the primary effects of the BRCE Project will have on the City of Barrie (herein referred to as the "City").

1. Metrolinx Rail Crossings

There are presently six (6) rail crossings within the City; with four (4) at-grade crossings and two (2) grade separated crossings. Metrolinx assessed all rail crossings on the rail corridor based on rail and vehicular traffic for 2015, 2021 and 2025 horizon years to determine warrants for grade separated crossings. The results of the Metrolinx assessment are as follows:

Lockhart Road:

- Future grade separation is warranted.

Mapleview Drive:

- Future grade separation is warranted.

Big Bay Point Road:

- The existing structure will accommodate the addition of a second track.

Cox Mill Road / Lovers Creek:

- An expansion of the crossing is required to accommodate the second track.

Little Avenue, Mileage 61.34:

- Future grade separation is warranted. Given the proximity to Hurst Drive; a grade separated crossing may not be possible.

Minet's Point Road, Mileage 62.03:

- Future grade separation is warranted.

With the exception of the Mapleview Drive grade separation that is being implemented by the City as part of the works to support growth in the Hewitt's Secondary Plan Area; Metrolinx has not provided timing for construction of grade separated crossings.

The City is in the process of scheduling a meeting with Metrolinx to further discuss cost sharing opportunities as well as development of an overall implementation plan for grade separated crossings within the City.

2. Station Improvements

Metrolinx has identified station improvements to facilitate the BRCE. As these works are identified as part of Phase 2 works, there is no specific timing on when they would occur. Noted improvements within the City include:

Barrie South Go Station:

- Addition of an east platform with underground pedestrian tunnels to accommodate the second track.

Allandale Waterfront Go Station:

- Metrolinx has identified station improvements including the addition of a south platform.

3. Property Requirements

Property acquisition will occur in Phase 2 of the BRCE Project, and as such, there is no specific timeline on when the acquisition process will commence. Metrolinx has committed to mitigating impacts from property requirements and acquiring property at fair market value. Development Services have been advised of the BRCE Project; the City will work with Metrolinx to ensure that development lands where widening is identified are protected and conveyed to Metrolinx where applicable.

City lands impacted by the corridor expansion include Painswick Park and the proposed southerly expansion. Elements within the park boundary may require relocation to accommodate the rail expansion.

4. Watercourse Conveyance Improvements

Metrolinx has completed an assessment of existing conveyance infrastructure (culvert/watercourse crossings). The assessment noted that one (1) culvert is to be replaced due to condition, five (5) culverts extended to accommodate the track widening and one (1) culvert replaced due to deficient hydraulics. Metrolinx notes that a detailed stormwater management plan will be completed as part of detailed design.

5. Noise Impacts – Construction & Operations

Metrolinx has committed to using construction best management practices to reduce construction sound levels. Metrolinx has assessed noise impacts for operation of the expanded BRCE and GO Stations with increased rail traffic. The assessment noted requirements for noise mitigation when future rail noise exceeds the pre-project sound level by 5 dB.

Within the City limits, the assessment concluded that noise mitigation is not required under Future Scenario 1 and required only at the Lockhart Road at-grade crossing under Future Scenario 2. Metrolinx noted that the need for sound mitigation is primarily driven by train whistling for the at-grade crossing. Both Metrolinx and the City have identified the need for a grade separated crossing at Lockhart Road and therefore the implementation of a grade separated crossing would eliminate the need for train whistling.

6. Vibration Impacts – Construction and Operations

Similar to the noise assessment; Metrolinx completed a vibration assessment for both construction and operations. The assessment concluded that vibration mitigation is not required for operations. Vibration impacts attributed to construction activities are anticipated to be short term in nature and Metrolinx has committed to utilizing construction best management practices to minimize construction vibration.

7. Barrie Collingwood Railway (BCRY)

Presently, BCRY operates on an isolated yard track through the Allandale Waterfront GO Station and Barrie layover facility connecting the Meaford spur and Beeton spur. Isolation of this track allows BCRY to schedule train trips to and from the Utopia yard without any restrictions due to Metrolinx rail traffic.

The addition of the second track will require BCRY to share the previously isolated yard track through the Allandale South Station and Barrie layover facility with Metrolinx. Due to considerable Metrolinx rail traffic, movement through the Allandale Waterfront Station and Barrie layover facility will be restricted. Metrolinx has noted that further coordination with BCRY is required. The City will seek to develop a solution that may mitigate some impacts associated with the loss of the isolated yard track, but it is anticipated significant BCRY operational adjustments will be required, which may impact service delivery.

8. Next Steps

Metrolinx have advertised the Notice of Completion. Staff have reviewed the BRCE Engineering Project Report and have noted that there are no significant concerns that cannot be addressed through further discussions with Metrolinx during detailed design.

Issues remaining to be addressed include:

Grade Separated Crossings – Cost Sharing:

- Staff will continue cost sharing discussions with Metrolinx for all grade separated crossings.

Grade Separated Crossings – Preliminary Design/Property Requirements:

- The City will be requesting Metrolinx proceed with preliminary design to implement/assess grade separated crossings not presently being advanced by the City (e.g. Lockhart Road, Little Avenue, Minet's Point Road) for the purposes of long-range capital planning as well as property protection.

Drainage/Conveyance Improvements:

- As part of Phase 2 works (timing not identified); City staff will share the latest information with Metrolinx to ensure drainage improvements are sized to reduce flooding and account for climate change impacts.

Property Requirements – Painswick Park:

- To accommodate the corridor widening, park elements may require relocation. As Metrolinx will be acquiring property as part of Phase 2 works, there is no immediate impact to park programming. City staff will work with Metrolinx to determine if existing and planned park elements can remain through implementation of retaining walls in lieu of grading to reduce the quantity of property required. If not technically feasible, additional options may include relocation of park elements. The City would seek compensation from Metrolinx if relocation is required.

BCRY Operation Impacts:

- The City will be seeking opportunities to reduce impacts to BCRY operations as well as detailed procedures for BCRY rail traffic through the Allandale Waterfront GO Station and Barrie layover facility.

Electrification:

- Electrification of the Barrie Rail Corridor is being completed under a separate study (GO Rail Network Electrification TPAP). Metrolinx has noted that advertising of the Notice of Completion is anticipated in October. A separate memorandum will be prepared when the advertisement is published.

Staff are committed to working with Metrolinx to implement the BRCE Project and resolving the outstanding issues noted above.

If there are any questions, please contact Brett Gratrix at extension 5117 or by email Brett.Gratrix@barrie.ca.