



To: Metrolinx Board of Directors

From: John Jensen
Chief Capital Officer, Capital Projects Group

Date: September 9, 2016

Re: **Capital Projects Group Quarterly Report: September 2016**

Recommendation

That this report is received for information.

Executive Summary

The Capital Projects Group (CPG) is advancing a large and growing program, involving signature projects like Regional Express Rail (RER), the Eglinton Crosstown LRT, the Finch West LRT, the Hurontario LRT and the Hamilton LRT. Each project has its own profile in terms of schedule, budget and risk management plan. In addition to managing specific projects, work is also underway to enhance overall program management systems, controls and processes in order to improve outcomes, apply consistent and replicable standards and monitor the entire program in a more comprehensive fashion.

Metrolinx's capital program continues to grow with the Province's June 2016 announcement to expand GO Transit rail service to Bowmanville, Niagara and Kitchener. The 20-kilometre extension to Bowmanville is expected to open by 2024 and will serve Durham residents with four new stations. Weekday service to Niagara Region is expected to begin in 2021 with service to Niagara Falls by 2023. Metrolinx has secured an agreement-in-principle with CN which will allow RER service on the Kitchener Corridor and begins the planning for a new freight corridor that will remove freight traffic from the Kitchener Corridor.

Metrolinx's major capital projects are currently on-time and on-budget, as shown in Table 1.

Table 1: Project Status

| Corridor | Project Stage | Approved Budget for Capital Construction | In-Service Date | On-Time | On-Budget |
|-------------------------------|---------------------|--|-----------------|---------|-----------|
| Rapid Transit Projects | | | | | |
| Eglinton Crosstown LRT | Construction | \$5,300,000,000 ¹ | 2021 | ● | ● |
| Finch West LRT | Design/Construction | \$1,000,000,000 ¹ | 2021 | ● | ● |
| Hurontario LRT | Design | \$1,400,000,000 ² | 2022 | ● | ● |
| Hamilton LRT | Design | \$1,000,000,000 ² | 2024 | ● | ● |
| Viva BRT | Various | \$1,500,000,000 ¹ | Various | ● | ● |

| Corridor | Project Stage | Approved Budget for Capital Construction | In-Service Date | On-Time | On-Budget |
|---------------------------------------|---------------------|--|-----------------|---------|-----------|
| Regional Express Rail Projects | | | | | |
| Barrie | Design | \$1,440,000,000 | 2025 | ● | ● |
| Kitchener | Design | \$1,540,000,000 | 2025 | ● | ● |
| Lakeshore East | Design | \$740,000,000 | 2025 | ● | ● |
| Lakeshore West | Design | \$400,000,000 | 2025 | ● | ● |
| Milton | Design | \$4,000,000 | 2025 | ● | ● |
| Stouffville | Design/Construction | \$570,000,000 | 2025 | ● | ● |
| USRC ³ | Design | \$690,000,000 | 2025 | ● | ● |
| Network Infrastructure ⁴ | Design | \$4,480,000,000 | 2025 | ● | ● |
| Vehicles | Design/Study | \$2,600,000,000 | 2031 | ● | ● |
| Parking, Access & Property | Design/Study | \$1,030,000,000 | Various | ● | ● |
| Total RER | | \$13,500,000,000² | | | |

¹ \$2010.

² \$2014.

³ See Union Station Rail Corridor update below for more information.

⁴ Includes Electrification and Signals.

RAPID TRANSIT

Light Rail Transit (LRT) Update

Eglinton Crosstown LRT

Crosslinx Transit Solutions (Crosslinx), the consortium delivering the Design-Build-Finance-Maintain (DBFM) contract for the Eglinton Crosstown LRT project, has started construction, including demolition and utility relocations at a number of stations across the line. Excavation is in progress at Keele Station, the project's pilot station, as well as at Laird Station. Premier Kathleen Wynne was on site at Laird Station on June 30, 2016 to celebrate the start of excavation. Crosslinx continues their design work and will submit the completed 60% engineering design packages in Fall 2016.

The tunnelling of the underground portion of the Eglinton Crosstown LRT is now complete. The tunnelling of the west segment was completed in May 2016 and the east segment was completed in August 2016. Work still continues on the excavation shafts, which will eventually be the sites of the Cedarvale (formerly Eglinton West) and Eglinton underground stations.

Finch West LRT

The Request for Proposal (RFP) for the DBFM contract for the Finch West LRT was released in February 2016 and the project is now in the in-market period. Meetings with the three proponents (Humber Valley Transit Partners, Mosaic Transit Group and FACT Partners) are ongoing, with a focus on the design presentation meetings. These meetings will help prepare the proponents in completing their proposals by the end of 2016. The successful proponent will be announced after commercial and financial close in Spring 2017.

Hurontario LRT

The technical advisor for the Hurontario LRT is working towards completing two key components of the tender documents: the Reference Concept Designs and the Project Specific Output Specifications. These technical documents will be part of the RFP, which will be released in Winter 2017.

In July 2016, a Memorandum of Understanding (MOU) between Metrolinx, the City of Mississauga, and the City of Brampton was approved by both City Councils. The MOU, along with an accompanying Real Estate Services Protocol, was executed in August 2016.

The Hurontario LRT project team will continue to coordinate with GO Transit and MiWay for the projects that interface with the LRT.

Hamilton LRT

The technical advisor for the Hamilton LRT is working towards completing two key components of the tender documents: the Reference Concept Design and the Project Specific Output Specifications. These technical documents will be part of the RFP, which will be released in Summer 2017.

A preferred Maintenance and Storage Facility (MSF) location has been identified and discussions with property owners are proceeding.

Metrolinx and the City of Hamilton, as co-proponents, continue to advance work on an addendum to the 2011 Environmental Assessment (EA) to address changes to the announced project scope. The EA addendum is currently on track to be completed by Spring 2017. A series of public information sessions will take place across Hamilton in September 2016 to provide the public with details on the proposed project design and seek public feedback.

Bus Rapid Transit (BRT) Update

Yonge Street – Viva Bundle – Richmond Hill to Newmarket

Design and field investigations by York RapidLINK Constructors, the design-build (DB) team led by Aecon and Dufferin, are ongoing; 100% design packages for all segments have been reviewed. The watermain construction in the Town of Richmond Hill commenced in June 2016. The overall project is expected to be complete by the end of 2018.

Highway 7 – Vaughan to Richmond Hill (H2)

The field utility, geotechnical, and environmental investigations required to start construction on the BRT are nearing completion, and detailed design activities are now underway. Design workshops to address comments from the technical review have commenced. The 90% design submission for Centre Street watermain and the 100% design submission for Bathurst Street watermain are under technical review. Construction on the Bathurst Street watermain began in June 2016 and will be completed in Fall 2016. The overall project is expected to be complete by the end of 2020 with service starting in 2019.

Highway 7 – Vaughan Metropolitan Centre (H2 VMC)

Construction of the Highway 7 VMC BRT is advancing with the section east of Jane Street expected to be complete in Fall 2016. Construction works are ongoing with the roadway segment scheduled to be completed in October 2016.

Preparation works have commenced for the foundation construction of the station at Millway Avenue, which will coincide with the opening of the TTC's Toronto-York Spadina Subway Extension.

Davis Drive – Newmarket (D1)

The Davis Drive rapidway opened for revenue service in November 2015. The remaining streetscaping work is in progress and will be complete by Fall 2016.

Mississauga Transitway

The second community meeting with residents adjacent to the Erin Mills Parkway station was held on July 19, 2016. Metrolinx has committed to addressing residents' concerns by making substantial modifications to the existing station. These modifications include removing the existing washroom on north side of the building, adding landscaping to create a visual barrier between the station and nearby houses, replacing the existing fence with a more substantial fence, rerouting the current buses and reducing lighting levels. These changes are underway and are targeted for completion by the end of 2016, pending third party approvals and permission to enter from residents for the fence installation.

Construction of the Winston Churchill station continues and is expected to be complete by the end of 2016. Bus service to this station will begin in early 2017.

Bus Infrastructure

The construction contract for the Kitchener bus maintenance and storage facility will be awarded in September 2016. The facility will provide maintenance and storage for 20 buses in the Kitchener-Waterloo area and will support service expansion.

REGIONAL EXPRESS RAIL

Capital Projects Group continues to advance the procurement strategy framework for GO Regional Express Rail. The procurement strategy includes an enabling works program that is currently underway.

The enabling works program consists of design-bid-build (DBB), design-build (DB) and design-build-finance (DBF) procurements necessary to prepare for delivery of major elements such as electrification. The enabling works program will be advancing a number of projects, including but not limited to new stations on the Stouffville Corridor, a rail-rail grade separation at Davenport, a new tunnel under the 401 to accommodate new tracks and various other projects which are described in more detail below.

Corridor Infrastructure Update

Barrie Corridor

As part of the work on the Dufferin Street Bridge, Metrolinx is partnering with the City of Toronto to extend the West Toronto Railpath, a multi-use trail, to the West Queen West community. This extension will run along the existing rail corridor, creating a new connection between Dupont Street and Dufferin Street. This community investment is in addition to the recently announced new GO Train stations proposed in Liberty Village and Bloor-Davenport. Metrolinx is also sharing the cost of a new city park, which will act as a hub for the railpath users.

Construction commenced on the Downsview Park GO station in July 2016. This work is in collaboration with the TTC's Toronto-York Spadina Extension (TYSSE) project and is expected to be complete by the end of 2017, in time for the opening of the subway extension.

The decision from the Minister of the Environment and Climate Change for the Davenport Diamond grade separation EA was issued on August 2, 2016 and the project may proceed with no conditions. Work also continues on an EA to add an additional track to the corridor and a train layover facility in Bradford to support rail service in both directions. A public meeting for the layover facility was held on July 13, 2016. A second series of public meetings for the full corridor is anticipated to be held in Fall 2016.

Metrolinx is investing in several parking structures along the Barrie Corridor. The contract to design the Rutherford parking structure was awarded in July 2016 and design work is now underway.

Kitchener Corridor

Two hundred and twenty-three (223) new parking spaces opened at Mount Pleasant GO station in Brampton on July 18, 2016, bringing the total number of parking spaces to 1,487. In addition to the new parking lot, a new Kiss & Ride, bike shelter and heated customer shelter also opened.

Lakeshore East Corridor

The Notice of Commencement for the EA covering the expansion of the Lakeshore East Corridor between Guildwood and Pickering GO stations was issued on July 7, 2016. The Lakeshore East Expansion project includes the addition of a third track, modifications to two rail bridges, electrification enabling works and grade separations at Scarborough Golf Club Road, Galloway Road and Morningside Avenue.

The consultant assignment for the detailed design of the fourth track between the Union Station Rail Corridor and Scarborough Junction was awarded in August 2016. Detailed design is scheduled to be complete by the end of 2017 to facilitate construction of the fourth track to support implementation of RER service in 2024.

Two new pedestrian tunnels were installed at Guildwood Station in July 2016.

Lakeshore West Corridor

The north platform at the West Harbour GO Station in Hamilton has been open for over a year. The second phase of the station construction opened in August 2016. This work includes a second platform and the associated south track, two hundred and ninety (290) remaining parking spots and two (2) accessible elevators,

The consultant assignment for the EA and preliminary design of the Burloak Drive grade separation was awarded in June 2016. The EA will assess the impacts of separating the at-grade rail crossing that currently exists at Burloak Drive.

Milton Corridor

Metrolinx commenced a joint study with Canadian Pacific (CP) in July 2016 to determine opportunities for GO Train service frequency improvements based on freight traffic forecasts. The study will include simulations of various commuter rail and freight traffic scenarios across the entire corridor. The study will identify strategic infrastructure changes and upgrades and will be completed in Summer 2017.

Stouffville Corridor

The construction contract for the Lincolnville Layover Expansion was awarded in August 2016 and will be operational in January 2017 to support the addition of new peak-hour and peak-direction service. The expansion will include an additional track for train storage and upgrades to the existing track.

The Request for Qualifications (RFQ) for station modifications at Agincourt, Milliken, and Unionville GO Stations closed on August 12, 2016, with the selection of the shortlisted bidders. The Request for Proposal (RFP) was released on September 8, 2016 and the project is now in the in-market phase with financial close expected in early 2017. The station modifications include a new second track, platforms with elevator and stair access, platform enclosures, and various customer service amenities.

Union Station Rail Corridor

The Union Station Trainshed Rehabilitation project reached a major milestone in August with the commencement of the next phase of track and platform rehabilitation work, resulting in a change in customer platform access. In addition, Metrolinx awarded the design services contract in August 2016 for the Union Station Enhancement Project (USEP). The USEP is a key component of the Regional Express Rail (RER) initiative, as it will increase station capacity, upgrade customer service systems and prepare for GO electrification.

Design contracts were also awarded in July 2016 for the East and West Track Enhancement projects. These projects will add new track and improve existing track to increase speed capabilities and additional mainline capacity at the east and west limits of the Union Station Rail Corridor. Budget pressures continue to exist on the Union Station Trainshed Rehabilitation project due to complexities of construction in an operating environment at Union Station. As the design develops for Union Station Enhancement Project, budget pressures will be closely monitored.

Network Infrastructure Update

Network Signals and Communication

The Request to Qualify and Quote (RQQ) for technical advisor services for the Enhanced Train Control and Conventional Signalling Program was released on June 30, 2016 and will close in September 2016. The Enhanced Train Control and Conventional Signalling Program includes the addition or replacement of signalling technology on the rail corridors to ensure compatibility with electrification and to improve the safety and capacity of the system in support of the RER objectives. The consultant will provide technical and professional services to support Metrolinx in the management of the program through both the procurement and implementation phases.

Network Facilities

Construction on the fuel system upgrade at the Willowbrook Rail Maintenance Facility began in August 2016 and is expected to be completed by the end of 2017. The fuel system is currently at the end of its lifecycle and is in need of replacement. This project will replace the existing system and add additional fueling stations.

Construction of the new East Rail Maintenance Facility continues and is progressing well. Construction of several of the facility's buildings is well underway and foundation construction and structural steel assembly is nearing completion. The project will be a LEED Gold certified facility,

based on its use of exceptional products, materials, construction methods and energy and water systems. The facility is expected to be completed by December 2017.

Construction of the new GO Transit Control Centre in Oakville started at the end of February 2016 and is progressing well. The project is expected to be completed in July 2018.

Respectfully submitted,

John Jensen
Chief Capital Officer, Capital Projects Group