



Transit Network Expansion Update

Date: February 10, 2022
To: TTC Board
From: Deputy Chief Executive Officer
Chief Capital Officer

Summary

As a leading transit operator carrying 530 million trips annually (pre-pandemic) and backed by more than 100 years of institutional knowledge, the TTC is contributing its considerable expertise to boldly expand the TTC Network while centering TTC customers in all of our service.

Working across operations, maintenance, engineering, communications, and strategy disciplines, the TTC and Metrolinx teams are collaboratively developing the expanded service for transit system of our city: an integrated, accessible, safe transit network seamlessly interfacing with the existing network, and connecting TTC customers with all of the mobility options within the City, and to neighbouring municipalities.

The TTC's commitment for transparency and accountability is through timely, accurate, and complete reporting. This report is the third in a series of Transit Network Expansion reports since February 2021 through which staff provide bi-annual updates on the progress of projects expanding the TTC Network and of key TTC interest.

Recommendations

It is recommended that the Board:

1. Receive this general update on transit expansion projects.
2. Authorize the Chief Executive Officer to enter into an agreement to receive funding from Metrolinx for the "Infrastructure Works Required for Queen Street Road Closures to Enable Metrolinx Delivery of the Ontario Line Project".
3. Subject to Recommendation 2, approve an increase to the TTC's 2022 – 2031 Capital Budget and Plan to reflect the updated cost required to undertake the Queen Streetcar Infrastructure work for the Ontario Line Project from \$15 million to \$19.3 million and an increase in the number of temporary capital positions from 4 to 16 positions to perform the capital work, with the total cost to be fully recovered from Metrolinx.

4. Subject to Recommendation 2, staff submit the capital budget adjustment in the City's first 2022 capital variance report for City Council approval.
5. Authorize the Chief Executive Officer to enter into the Subway Program Real Estate Protocol Agreement with Metrolinx and the City of Toronto for the Provincial Priority Subway Program based upon the key principles summarized in Appendix B of this report, to the satisfaction of the TTC's General Counsel.

Financial Summary

There are various financial implications associated with the Transit Expansion Program summarized below.

Provincial LRT Program: Line 5 Eglinton – Operating and Maintenance Costs

Line 5 Eglinton is owned by the Province of Ontario, delivered by Metrolinx and will be operated by the TTC. The 2012 Master Agreement entered into by the TTC, City and Province, and 2016 Agreement in Principle entered into by the City and the Province and revised in 2021, established the TTC as the operator and the City of Toronto as the funder of operating and day-to-day maintenance costs, with all fare and non-fare revenue to be received by the City. Funding for 2022, as outlined in the following table, is included in the 2022 TTC Conventional and Wheel-Trans Operating Budgets approved by the TTC Board on December 20, 2021 which will be considered by City Council on February 17, 2022. Funding for 2023 has been included in the Operating Budget Outlook.

Preliminary Line 5 Operating Costs (\$M)	Incremental Changes			Cumulative Annual Total
	2021	2022	2023	
Labour and Benefits	3.9	13.3	9.2	26.5
<u>Non-Labour Costs</u>				
Maintenance Contract (as provided by MX)	-	10.0	28.9	38.8
Utilities & Traction Power	-	1.9	6.8	8.7
Other non-labour, including faregate maintenance, uniforms & startup costs	0.7	0.6	3.9	5.3
Subtotal Non-Labour	0.7	12.5	39.6	52.8
Total Cost	4.6	25.8	48.9	79.2
Bus Service Savings			(8.6)	(8.6)
Incremental Revenue		(0.8)	(7.2)	(8.0)
Net Cost	4.6	25.0	33.1	62.7
Total Headcount	241	249	246	236

Provincial Priority Subways Program

Planning and Development Phase Costs

As previously reported on July 23, 2019, the Province enacted a regulation (*O. Reg 248/19*) that designates the Scarborough Subway Extension, Yonge North Subway Extension and Relief Line South and North as 'sole responsibility projects' of Metrolinx. Effective August 30, 2019, consultant contracts for these transit expansion projects were reassigned to Metrolinx from the TTC based on the Province's legislated authority to transfer assets, rights and obligations related to the projects from the TTC to Metrolinx. TTC costs of \$239 million incurred up to August 31, 2019 were funded by the City. Pending a review, a reimbursement from the Province to the City is anticipated per the Toronto-Ontario Partnership Agreement entered into in 2019.

TTC's Project Assurance Responsibilities

The TTC is actively working with Metrolinx to identify necessary resources to support the Provincial Priority Subway Program based on the program schedule updates provided by Metrolinx. Based on the previous known plan, the 2022 Operating Budget included 36 full-time positions fully funded by Metrolinx to support the Provincial Priority Subway Program. TTC resource requirements will be reviewed annually against Metrolinx's planned program of work. Should any additional resources be required, TTC's Operating Budget and staff complement will be amended, subject to confirmation of full funding by Metrolinx and in accordance with the delegated authority authorized to the Chief Financial Officer by the [TTC Board at its February 2021 Board meeting](#). Any changes authorized under this delegated authority will be reported to the Board in future quarterly financial variance reports.

Ontario Line Project Queen Street Closure – TTC Infrastructure Work

On November 12, 2021 Metrolinx issued a letter of intent to the City and the TTC for the "Infrastructure Works Required for Queen Street Road Closures to Enable Metrolinx Delivery of the Ontario Line Project". The letter confirmed:

- The scope of the work to be undertaken, which included the 'reinstatement of streetcar infrastructure to support the 501 streetcar detour';
- Metrolinx intention to fund the full cost of the work as it is a requirement for the Ontario Line project;
- The City to seek Council authority for a temporary Queen Street road closure from Bay Street to Victoria Street; and
- Respective roles and responsibilities of the parties.

At its meeting of December 15 and 16, 2021, City Council adopted, with amendments, agenda item [EX28.14: Ontario Line Downtown Stations – Temporary Road Closures and Community Impacts](#), authorizing City staff to negotiate and enter into an agreement with Metrolinx and TTC for the delivery of Work in accordance with terms outlined within the report.

With respect to the establishment of a Queen Streetcar Detour, the TTC's estimate of the specific cost component for the work required for the 'reinstatement of streetcar infrastructure to support the 501 streetcar detour' was recently revised to \$19.3 million (Class 5 estimate), which is above the \$15 million included in the TTC's 2022 – 2031 Capital Budget and Plan, approved by the TTC Board on December 20 2021. This estimate will be refined as the design matures. In accordance with Metrolinx's correspondence, and subject to the final agreement being entered into, Metrolinx will be responsible for the final actual costs associated with the design, procurement and delivery of the streetcar infrastructure. Metrolinx has issued the TTC Purchase Order (PO) of \$0.565 million, and is in the process of issuing PO for an additional \$5.04 million to cover the full costs to be incurred by the TTC up to the date of the executed agreement between the parties in order to advance procurement of the long-lead time materials, and to commence planning and design work to meet schedule requirements.

In addition to the 4 temporary capital positions included in in the TTC's 2022 – 2031 Capital Budget and Plan, 12 additional resources for a total of 16 temporary capital positions are included in the cost estimate provided to Metrolinx to ensure the successful delivery of this streetcar infrastructure work.

This report is recommending the Board provide authorization to the Chief Executive Officer to enter into an agreement to receive funding from Metrolinx for the streetcar infrastructure work, currently estimated at \$19.3 million. This will ensure full funding for additional TTC streetcar infrastructure necessary to facilitate the required Queen Street road closures.

This report also recommends the Board to approve increasing the TTC's 2022 – 2031 Capital Budget and Plan from \$15 million to \$19.3 million for the Infrastructure work for the Queen Streetcar Detour for the Ontario Line Project. Subject to the Board's approval, a capital budget adjustment of \$4.3 million and complement change of 12 capital positions will be included in the TTC's submission to the City for its first 2022 capital variance report to seek City Council's approval for the budget adjustment and increased funding source.

Subway Program Real Estate Protocol Agreement

The Real Estate Protocol (REP) is a stand-alone agreement between the TTC, the City and Metrolinx setting out the terms governing the access, acquisition, ownership and disposition of real estate property between the parties that is required to facilitate the construction of the Subways Program.

There is no current financial implication related to entering into the Subway Program Real Estate Protocol Agreement with Metrolinx and the City.

The Chief Financial Officer has reviewed this report and agrees with the Financial Summary information.

Equity/Accessibility Matters

As a proud leader in providing accessible and reliable public transit, the TTC believes that all customers should enjoy the freedom, independence and flexibility to travel anywhere on its transit system. Expanding the TTC's transit network through this program will reduce travel times and create greater transit equity, contributing to wider access to jobs, education, other opportunities, healthcare and community services. Upon the completion of the projects described in this report, all of the city's Neighbourhood Improvement Areas (NIAs) will be within walking distance or a short bus/streetcar ride to connect to rapid transit.

All new stations, including interchange stations and connections to existing TTC facilities, will be designed to be accessible and in accordance with the Accessibility for Ontarians with Disabilities Act, 2005 (AODA) and the Ontario Building Code. Features will include redundancy for vertical circulation and application of the most recent best practices for accessible design. All rapid transit stations will be designed to provide connectivity with TTC Wheel-Trans as well, broadening the Family of Services.

As requested by the Board, Metrolinx has committed to conduct meaningful consultation with the TTC's Advisory Committee on Accessible Transit (ACAT) as part of the Project Specific Output Specification (PSOS) review and design review for all projects within the provincial programs. This process began in August 2021 when ACAT's Design Review Subcommittee was consulted on the subway program accessibility requirements to be included in each subway project PSOS, as well as specific requirements and early concept designs for the stations to be built as part of the Ontario Line project. In November, Metrolinx and ACAT met again to review requirements and reference concept designs for the Line 2 East Extension (Scarborough Subway Extension project) with further meetings expected in Q1 and Q2 2022 related to the Line 5 West Extension (Eglinton Crosstown West Extension project) and the Line 1 Yonge Extension (Yonge North Subway Extension project), respectively.

Decision History

A detailed transit expansion decision history is described the February 10, 2021 report and September 15, 2021 report to the Board linked below.

[February 10, 2021 Transit Network Expansion Update](#)

[September 15, 2021 Transit Network Expansion Update](#)

In February 2021, the TTC Board received an update report and "authorized the Chief Executive Officer, in consultation with the City Manager, City of Toronto where applicable to negotiate a Master Agreement and/or other applicable Agreements with the Province and/or any other relevant provincial agency for the purposes of the planning, procurement, construction, operations and maintenance of the Subway Program, in accordance with Board and City Council direction and to report back to the Board on the results of such negotiations."

In addition, Toronto City Council recently adopted two reports at the December 15, 2021 meeting, which have been transmitted to the February 10, 2022 meeting of the TTC Board for information and are referred to in this report.

[EX28.12 Metrolinx Subways Program – Real Estate Protocol and Land Valuation Principles for Subways and GO Expansion Programs.](#)

[EX28.14: Ontario Line Downtown Stations – Temporary Road Closures and Community Impacts](#)

1. Requested the Toronto Transit Commission to include, in future reports, information on what is being done to maintain and advance time availability of its surface fleet in the construction area, in particular, streetcars.
2. Directed the Toronto Transit Commission, to increase the availability and efficiency of nearby surface fleets, including streetcars and bus routes, and investigate the feasibility of priority routes, bus-only lanes, and other methods to support and improve public transit.

Issue Background

All TTC network expansion projects make transit service better in Toronto and improve connections to, and integration with, the broader regional transit network. The TTC provides regular updates on key TTC interests in transit expansion projects in this report and in historic transit network expansion reports.

[February 10, 2021 Transit Network Expansion Update](#)

[September 15, 2021 Transit Network Expansion Update](#)

Comments

Toronto Rapid Transit Network Expansion

Major expansion and capacity improvements to the TTC network is underway. Key programs and projects are highlighted in Table 1.0 below.

Table 1.0 Rapid Transit Network Expansion and Interdependent TTC Programs and Projects

Program	Project	TTC Line	Current Phase	Anticipated In-Service
Interdependent Major TTC Programs/Projects				
TTC Transit Control		Network Wide	Preliminary Design	2028
Priority TTC Capacity Enhancement	Bloor-Yonge Capacity Improvements Project	Line 1 Yonge-University and Line 2 Bloor-Danforth	Stage Gate 3	2030**

Program	Project	TTC Line	Current Phase	Anticipated In-Service
Provincial Programs/Projects				
Provincial LRT Program	Eglinton Crosstown	Line 5 Eglinton	Construction	2022*
	Finch West LRT	Line 6 Finch West	Construction	2023*
Provincial Priority Subway Program	Yonge North Subway Extension	Line 1 Yonge-University	Planning/Procurement	2029-2030*
	Scarborough Subway Extension	Line 2 Bloor-Danforth	Advance Tunnel Contract: Awarded; Stations/Rail/Systems, Planning Kennedy Enabling Works, Detailed Design	2029-2030*
	Ontario Line	Future Line 3	Planning/Procurement	2030*
	Eglinton Crosstown West Extension	Line 5 Eglinton	1st Advance Tunnel Contract: Awarded; 2nd Advance Tunnel Contract : Procurement Stations/Rail/Systems, Planning	2030-2031*
Provincial Subway Program	Line 4 Sheppard East Extension	Line 4	Concept Definition (assumed)	TBD
City/TTC Expansion				
Eglinton East LRT Extension		Line 5 Eglinton	Planning	TBD
Waterfront Transit	Waterfront Transit – Waterfront East	Various streetcar routes	Preliminary Design and Engineering	2030-2031
	Waterfront Transit – Exhibition Loop-Dufferin Gate Loop	Various streetcar routes	Preliminary Design Project on hold pending evaluation of Ontario Line impact	TBD

Program	Project	TTC Line	Current Phase	Anticipated In-Service
Bus Rapid Transit (BRT)	Durham – Scarborough BRT	Various TTC and regional bus routes	Preliminary Design	TBD
	Dundas BRT	Various TTC and regional bus routes	Concept Definition	TBD

* Based on schedule provided by Metrolinx; **Targeted in-service date of new Line 2 platform

Transit Control Integration

An integrated Transit Control facility is critical for the safe and integrated operation of the existing and the expanded transit network discussed in this report. The TTC is planning and designing a fully integrated Transit Control facility to accommodate the TTC and the TTC Network requirements up to 2045.

This facility will incorporate the Transit Control needs of the TTC’s current transit infrastructure and modes (subway, streetcar, LRT and bus) with allowances for growth and the Transit Control needs of new lines and line extensions. As such, the project is partially dependent on the successful delivery and integration of the Metrolinx and City projects outlined in this report into the TTC Network.

The project is currently in the preliminary design phase and the facility is expected to be operational in 2028.

Priority TTC Capacity Enhancements

Priority TTC capacity enhancements are TTC capital programs that address critical capacity issues on the existing network, primarily at the Bloor-Yonge Station interchange. The Bloor-Yonge Capacity Improvements project has progressed to Stage Gate 3 to establish the overall project preliminary design baseline definition for project scope, schedule and cost, as well as the recommended project delivery strategy with the details included in the [Bloor-Yonge Station Capacity Improvement Project – Stage Gate 3 report](#) approved by TTC Board in December 2021.

Bloor-Yonge Station is a critical pre-condition for further network expansion planned by the Province/Metrolinx, including the Yonge North Subway Extension. The opening of the new platform on Line 2 eastbound at Bloor-Yonge Station is being co-ordinated to meet the timing of the Yonge North Subway Extension as well as the Ontario Line.

Provincial LRT Program – Line 5 Eglinton and Line 6 Finch West

The TTC continues its operational readiness planning for a 2022 revenue service date for Line 5 Eglinton and a 2023 revenue service date for Line 6 Finch West. Pending receipt of an updated project schedule with an official revenue service date for Line 5 Eglinton, Metrolinx and the TTC have agreed to a planning date of October 9, 2022. The

operational readiness plan includes detailed schedules for hiring, training, testing and commissioning and safety certification. The plans are in review with Metrolinx and will be reported to Board when finalized.

Line 5 Eglinton – Operating Model and Agreement

While Line 5 Eglinton introduces a new operating model for the TTC, for the customer it is simply another line in the TTC Network. As with all of the TTC operations, the overarching purpose is to provide a seamless customer experience across the network to meet customer needs. To provide a seamless customer experience, the TTC and Metrolinx must agree to their respective roles and responsibilities. This will be set out in the agreement which is known as the Train Operating and Funding Agreement (TOFA). The City, the TTC and Metrolinx will be the parties to the TOFA.

The TTC is the Operator and, as Operator, the TTC relies on Metrolinx to ensure safe and reliable maintenance of all assets. The City will be responsible for funding the operations and non-life-cycle maintenance costs. A contracted maintainer to Metrolinx (ProjectCo) is responsible for routine and lifecycle maintenance. Metrolinx has full control over ProjectCo and the TTC is reliant upon Metrolinx for the enforcement of maintenance standards, including maintenance of equipment, infrastructure, assets and fleet. Metrolinx, through ProjectCo, is responsible for corrective and preventive maintenance and to resolve any maintenance-related issues raised by the TTC to Metrolinx.

The TOFA is comprised of two main elements: operations scope and commercial scope. The operations scope sets out the TTC's role as the Operator of the Line, while the commercial scope describes the City and the TTC's role in relation to farebox and non-farebox revenue, and payment for the operations and maintenance (O&M) expenses, amongst other commercial matters.

Operations Scope: The TTC has led discussions with Metrolinx to negotiate and finalize the operations scope of the TOFA, in accordance with the overarching principle of integrating Line 5 Eglinton into the TTC Network. The operations scope specifies that as the Operator of the Line, the TTC is required to provide "Operator Services" that include, but are not limited to:

- Operations Control Centre (OCC) System Wide Control
 - Train Traffic Control
 - Routine and Emergency Management
 - Live Route Customer Information
- Train Operations
- Station Operations and Supervision
- Security, including enforcement of TTC By-Law #1
- Revenue Protection
- Customer Service Interface

The operations scope is predominantly agreed between the TTC and Metrolinx, with a few outstanding elements that continue to be discussed.

Commercial Scope: The City, with support from the TTC, have been leading discussions with Metrolinx to negotiate and finalize the commercial scope of the TOFA based on City Council positions established in the 2016 Toronto-Ontario Agreement in Principle, which was revised in 2021. The commercial scope include, but are not limited to:

- Agreement Length and renewal process
- Agreement Termination provisions
- Liability and Damages provisions
- Dispute Resolution Process provisions
- Maintenance payments parameters and process
- ProjectCo maintenance obligations and Metrolinx-ProjectCo interactions
- Farebox and Non-farebox revenue
- Reimbursement for TTC Mobilization costs caused by project delays
- Reimbursement for TTC Bus Shuttle costs due to Line 5 maintenance work

The City continues to work with Metrolinx to negotiate and finalize key business terms, to ensure they are all aligned with the 2021 Revised Agreement in Principle.

The City and the TTC are targeting to finalize the commercial scope by end of Q1, 2022 and present a summary of Key Terms of the TOFA to the TTC Board at the April 2022 Board Meeting and to City Council at the May 2022 City Council Meeting.

Provincial Priority Subway Program

In April 2019, the Province of Ontario announced a new priority subway plan that includes four projects, collectively known as the Provincial Priority Subway Program:

- Yonge North Subway Extension (YNSE) project (Line 1 Yonge Extension);
- Scarborough Subway Extension (SSE) project (Line 2 East Extension);
- Ontario Line (OL) project (which will become the new Line 3); and
- Eglinton Crosstown West Extension (ECWE) project (Line 5 West Extension).

The TTC's expectation is that customers travelling on the expanded network will experience a seamless and reliable journey. A seamless journey includes fares, wayfinding, customer experience that is consistent across the TTC Network.

Additional program information is below and in previous transit network expansion Board reports.

Provincial Subways Program Operating and Maintenance (O&M) Roles and Responsibilities

As the Operator of an integrated multi-modal network, the TTC's commitment to customers is to deliver safe, seamless, accessible and reliable customer journeys across the TTC network.

Discussions between the TTC and Metrolinx in respect of Line 5 Eglinton O&M roles and responsibilities are well-advanced and will be formalized through the TOFA. The TTC and Metrolinx have agreed that O&M roles and responsibilities for the Line 5 West Extension will be consistent with the TOFA, taking into account technology differences and lessons learned upon operationalization of Line 5 Eglinton.

With respect to the Ontario Line, and the extension of Line 1 and Line 2, the TTC and Metrolinx are also aligned on a number of key O&M principles, including:

- Control of TTC Network operations (including co-location of control and operations personnel for expanded network operations) is from the integrated TTC Transit Control Centre;
- The TTC's Transit Control Centre is the single point of interface with third parties on behalf of the TTC network including but not limited to emergency response personnel, other operational control centres, etc.;
- The TTC manages all customer facing aspects of the TTC network, including in stations;
- The TTC directs emergency incident response on the TTC Network; and
- The TTC collects fares and inspects and enforces fare payment on the TTC Network.

There are still a few proposals that the TTC and Metrolinx are continuing to work through in order to bring alignment, including station operations at TTC and GO integrated stations, closures and diversions, tunnel ventilation and power control, and training. As a strong transit expansion partner, the TTC remains committed to working closely with Metrolinx to ensure the successful operationalization of the Province's priority subway projects.

Wayfinding and Branding

The TTC continues to advise Metrolinx on TTC wayfinding and branding guidelines for transit expansion projects that enhance the customer experience. The focus of current discussions is on finalizing the Line 5 Eglinton and Line 6 Finch West critical wayfinding and branding decisions. The outcomes of the LRT program discussion on wayfinding and branding will set a precedent for the Provincial Subway Program.

Agreements

The 2019 Toronto-Ontario Partnership Preliminary Agreement establishes Metrolinx as the asset owner of the four subway projects, the TTC as the operator and the City as responsible for funding net operating subsidy provider, with all capital contributions from the Province. The Preliminary Agreement outlines the expectations on funding contributions by the City, the Provincial and the Federal governments. As a result of this Agreement, the TTC, City, Metrolinx and the Province (Ministry of Transportation (MTO)) will enter into additional agreements to ensure alignment on planning, procurement, construction, operations and maintenance of the Subway Program.

The Toronto-Ontario Subway Agreement in Principle (AIP) is currently in development between the City and Province, and will build upon the principles established in the Preliminary Agreement, and is subject to approvals. The AIP establishes key elements of the Subway Program business model that are not included in the Preliminary Agreement and sets the framework for downstream agreements (i.e. the Subway Master Agreement). The scope of the elements to be outlined in the AIP include: operations and maintenance roles, fare policy, fare box revenue and non-fare box revenue, capital co-ordination and financial reconciliation on sunk costs. The TTC is providing input to the City on key elements of the AIP that are subject to the TTC's future role as the network operator in the interest of ensuring a seamless customer experience and integration with the TTC's multi-modal system.

The Subway Program Master Agreement is also in development between the City, Metrolinx and the TTC. The Master Agreement will be a detailed agreement on the implementation of the subway projects, and builds on the existing agreements (i.e. the Light Rail Transit Master Agreement) and incorporates lessons learned to date. A key component of the Master Agreement will be the Real Estate Protocol as outlined below.

Real Estate Protocol

The Real Estate Protocol (REP) between the City, TTC and Metrolinx sets out the terms governing the access, acquisition, ownership and disposition of real property between the parties that is required to facilitate the construction of the Subways Program. The REP is required in advance of the conclusion of negotiations of the Subway Program Master Agreement, as Metrolinx requires land for the Subway Program in the immediate term.

The City submitted a report to City Council in December 2021 on the Real Estate Protocol with Metrolinx. City Council authorized the City Manager in consultation with the CEO, TTC, to finalize negotiations and enter into and execute the Real Estate Protocol with Metrolinx for the Subway Program. Terms for the agreement were outlined in Attachment 1 of the City report and is included as Appendix B to this report.

2021.EX28.12

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.EX28.12>

Attachment 1 – Subway Real Estate Protocol Major Terms and Conditions

<https://www.toronto.ca/legdocs/mmis/2021/ex/bgrd/backgroundfile-173857.pdf>

The REP outlines the process to transfer rights for property (either required on a temporary or permanent basis) between Metrolinx and the City. The REP sets out the general terms for acquisition, valuation and environmental testing of the subject properties based on which jurisdiction the City lands fall within (i.e. public ROW versus City Parks jurisdictional land versus TTC jurisdictional land). The REP includes dispute resolution procedures if disputes arise during the process (i.e. disputes over valuation). As the Subways Program Master Agreement is not currently finalized, the City and the TTC have included clauses within the REP that would typically be outside of the scope of a real estate protocol. These terms include a TTC processes and approval protocol,

which establishes high-level requirements for Metrolinx to follow in carrying out the design and construction of the projects to facilitate the TTC's technical review and construction oversight of Subway Program infrastructure. The TTC Protocol is based on terms from the 2012 Master Agreement, and has been updated based on lessons learned.

This report is recommending the Board to authorize the Chief Executive Officer to enter into a Subway Program Real Estate Protocol Agreement with the Metrolinx for Provincial Priority Subway Program.

Provincial Subway Program Dependencies

Fleet, Maintenance and Storage Facility Planning

As outlined in the previous [Transit Network Expansion report](#), the provincial projects have a direct interdependence with the TTC fleet expansion, as well as and the need for new maintenance and storage facilities and modification to the existing facilities.

The TTC is working closely with Metrolinx for the planning and design for the facilities. The TTC is also actively seeking intergovernmental funding for the subway trains and the Train Maintenance Storage Facility (TMSF).

Station Planning

The Province announced that a station at Cummer-Drewry on the Line 1 Yonge extension would not be included as part of the construction of the project. The four stations now being planned are at: Steeles, Clark, Bridge, and High Tech. The City and the TTC continue to explore alternatives with the Province and Metrolinx to understand the costs of a possible station at Cummer-Drewry. This includes developing a more detailed cost breakdown to include the station as part of the current project delivery or to defer the station and protect for future construction. The TTC and the City continue to believe that Cummer-Drewry would be an appropriate addition to the transit network in Toronto, and would provide important additional rapid transit connections for existing and future TTC customers.

The TTC continues to work with the City and Metrolinx on the bus terminal designs at key stations, such as Steeles Station on Line 1 Yonge Extension, and Scarborough Centre Station and Sheppard-McCowan Station on Line 2 East Extension. These will be busy terminals with high volumes of customers transferring between the surface bus network and the new rapid transit. It is critical to design these terminals to meet future demand to ensure customers have a seamless and convenient experience. In particular, at Steeles Station, this means designing on-street bus facilities to support future BRT service along the corridor. The City and the TTC are working with Metrolinx to advance a final design for Steeles Station that will best meet customer demand and be compatible with the future BRT, including studying the construction of centre median bus platforms at Steeles Station to connect with the future Steeles BRT.

The TTC also continues to work with Metrolinx to incorporate the TTC's infrastructure requirements in the station design for the new bus terminals to support TTC's fleet

electrification program. This includes requirements to ensure the design of the bus facilities meets the required number of TTC bus bays; layover facilities; and confirming the geometries within the terminal to meet TTC operational standards.

ATC co-ordination for SSE and YNSE projects

To ensure line-wide signalling system safety and interoperability, a working group has been created for the ongoing coordination between the TTC and Metrolinx to extend the Line 1 ATC signaling system across the YNSE project, and to establish alignment between the future Line 2 ATC project and the signalling system for the SSE project.

Kennedy Enabling Works (KEW) with Line 3 Bus Replacement Project

As previously reported, the KEW have been identified as important early works to enable the station to have capacity to interface with the future SSE project. The TTC has been working closely with Metrolinx to finalize the design. Meanwhile, TTC staff are currently working to prepare the equipment and cabling relocations to support the KEW. As the latest update, the construction for the KEW is now anticipated as part of the SSE Station Rail and Systems Contract.

The timing and schedule of certain scope of work for KEW will need to be coordinated with the Line 3 Bus Replacement project. Line 3 Scarborough (or SRT) is planned to be closed in fall 2023 and be replaced with a bus service until the opening of Line 2 East Extension in 2030. The bus replacement service will require new temporary bus platforms to be added at Kennedy Station. The laydown and construction of the temporary platforms, and the substantial increase in bus traffic from the replacement service, will need to be co-ordinated with KEW.

Ontario Line Streetcar Diversions

The construction at Queen Station for Ontario Line will require the long term closure of Queen Street between Bay Street and Yonge Street and between Yonge Street and Victoria Street. In order to minimize the inconvenience to customers, TTC, City and Metrolinx staff are working collaboratively to restore streetcar tracks southbound on York Street (between Queen Street and Adelaide Street) and eastbound on Adelaide Street (between Charlotte Street and Victoria Street). This will allow the TTC to operate a better diversion for customers that is as close to Queen Street as possible and will not require the need for shuttle buses. The diversion for the streetcar service on Queen will be westbound via Church, Richmond, York to Queen; and eastbound via York, Adelaide, Church to Queen on the new restored streetcar tracks.

The restoration of all the required infrastructure will be funded by Metrolinx. This is captured in the November 12, 2021 Metrolinx letter of intent to the City and the TTC for the “Infrastructure Works Required for Queen Street Road Closures to Enable Metrolinx Delivery of the Ontario Line Project”.

The TTC is now refining the detailed design of the infrastructure with the City and Metrolinx, including elements related to utility relocation, stop locations, and streetscape

and traffic signal design. Construction is planned to start in Q2 2022, and will be complete by May 2023 in time for the street closure to commence.

As a result of the December 15, 16 and 17, 2021 Council meeting, “City Council request the Toronto Transit Commission to include, in future reports, information on what is being done to maintain and advance time availability of its surface fleet in the construction area, in particular, streetcars.” (Decision History: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.EX28.14>)

The TTC remains committed to provide a safe, seamless and reliable service for to customers during the construction of the Ontario Line Queen Street infrastructure work.

Provincial Subway Program 12 Months Major Milestones

Milestone Description	Completed	Upcoming
Scarborough Subway Extension		
SSE Advance Tunnel Contract Award	May 2021	
SSE TBM Launch Shaft Ground Break	June 2021	
Issue SSE Station, Rail, Systems RFQ	September 2021	
SSE Station, Rail, Systems RFQ Close	November 2021	
TBM delivery on site	January 2022	
Issue SSE Station, Rail, Systems RFP		Spring 2022
SSE Station, Rail, Systems RFP Close		Summer 2022
Yonge North Subway Extension		
Issue Finch Station Modification RFQ	December 2021	
Issue Advance Tunnel RFQ		Spring 2022
Issue Finch Station Modification RFP		Spring 2022
Eglinton Crosstown West Extension		
ECWE 1st Advance Tunnel Contract Award	May 2021	
Issue ECWE 2nd Advance Tunnel RFQ	December 2021	
Issue SQ for Elevated Guideway Contract	December 2021	
TBM delivery on site	January 2022	
Issue ECWE Station, Rail, Systems RFQ		TBC

Milestone Description	Completed	Upcoming
Ontario Line		
OL Early Work Contracts (Exhibition) Award	November 2021	
OL Delivery Partner Contract Award	November 2021	
OL South Civil and RSSOM RFP close		Winter/Spring 2022
OL Queen Street Closure Construction Start		Spring/Summer 2022

Priority City Expansion

Waterfront Transit – Waterfront East Streetcar

The Waterfront East project is part of the City’s priority transit projects. The project will expand the streetcar network from Union Station, along Queens Quay East to Cherry Street, to serve the growing East Bayfront and Port Lands neighbourhoods. The new streetcar service will be designed to operate in a dedicated right of way to deliver high-quality transit service to provide sufficient capacity for the growing waterfront areas.

The project is a collaborative effort between the TTC, City of Toronto, and Waterfront Toronto. With overall co-ordination by City staff, the TTC is delivering the planning and design for the section of the project at Union Station and Queens Quay-Ferry Docks Station. Waterfront Toronto is delivering the planning and design for the at-grade section of the project, east of Yonge Street, along Queens Quay East and Cherry Street. The project is at 30% design, and further due diligence is being undertaken to develop potential cost reduction options, and to determine the best phasing of the project. An update on this project is planned for City Council in Q2 2022.

Bus Rapid Transit

The TTC has been involved with municipal and provincial partners in planning for bus rapid transit (BRT) schemes that would upgrade bus infrastructure to increase the reliability, speed and capacity on some of the busiest surface transit routes in the TTC Network, and to better connect regional transit systems to the TTC system. This project is identified in the TTC’s 5-Year Service Plan & 10-Year Outlook.

The RapidTO program began in 2020 when transit priority lanes were introduced on Eglinton Avenue East/Kingston Road/Morningside Avenue. The traffic and transit data monitoring on the corridor has shown improvements to transit travel times (up to five minutes in the p.m. peak compared to the week prior) and ridership (boardings are outperforming system wide bus boardings) with minimal impact to traffic. TTC and City staff continue to monitor and make adjustments along the corridor to improve the flow of both modes. Additionally, work is underway on the preliminary designs and traffic models for various types of transit priority treatments for Jane Street, between Steeles Avenue and Eglinton Avenue, the second RapidTO corridor, with public and stakeholder consultation anticipated by mid-2022.

Meanwhile, the City in partnership with the TTC is beginning Phase 2 of consultation for the wider RapidTO Bus and Streetcar Priority program. This program will identify a series of priority roadways and study the application of different options of transit priority measures over the next 10 years. Buses continue to play a significant role in moving large numbers of customers, carrying 70% of all TTC trips today. Given priority, buses could move even more customers. More reliable bus routes with shorter travel times will improve access to employment, healthcare and community services, as well as improve transit equity. Improvements could range from reserved transit lanes to queue jump lanes and other transit priority measures listed on the City's RapidTO webpage.

TTC staff continue to work with our partners at the City of Toronto and Metrolinx to advance preliminary works on two bus rapid transit (BRT) projects – the Dundas BRT as well as the Durham-Scarborough BRT. These two projects aim to provide high-quality transit connections from the east in Durham Region to Scarborough Centre, and from as far west as Hamilton to Kipling Station.

The Dundas BRT will be a longer-term project as it requires co-ordination between several different municipalities and regions and must be responsive to very different cross-sections and service priorities along the route. Most recently, on December 10, 2021, the City of Mississauga and Metrolinx filed a Notice of Commencement for a Transit Project Assessment Process (TPAP) covering the section of project between approximately Hurontario Street and the Mississauga city limits. TTC staff are primarily focused on the section within Toronto city limits where discussions are ongoing as to the interim condition to be pursued on Dundas Street between the City of Toronto limits and Kipling Station.

The Durham-Scarborough BRT project is more advanced and work is ongoing to finalize the TPAP. In response to community and City feedback, the preferred design between Military Trail and Kingston Road has shifted from the originally proposed six-lane cross-section (four general traffic lanes with centre bus lanes) to a four-lane cross-section (two general lanes with centre bus lanes). The TTC and the City have been working together to provide feedback to Metrolinx to ensure that this project continues to serve the transit needs of the Highland Creek neighbourhood. In particular, the TTC and the City have communicated to Metrolinx the need to ensure that additional stops and pedestrian crossings are considered through this section. Shorter stop spacing would allow TTC buses to take advantage of the improved travel times and reliability from the BRT in this section while still providing high-quality access from the local community.

Line 4 Sheppard East Extension

As part of their 2019 announcement, the Province indicated that they would consider an eastward extension of Line 4 Sheppard, from Don Mills Station to connect with the proposed station on the Line 2 extension at Sheppard Avenue and McCowan Road. The Province indicated that planning work on this extension will begin after more work on the existing four provincial projects has commenced and will be reported back in due course.

Line 5 Eglinton East LRT Extension

In December 2020, Council directed City staff to advance the Eglinton East LRT project concept as a Line 5 easterly extension from Kennedy Station. The proposed alignment would operate from Kennedy Station along Eglinton Avenue East, Kingston Road, Morningside Avenue, through the University of Toronto Scarborough Campus (UTSC), and then along Sheppard Avenue and Neilson Road to Malvern Town Centre. Council also directed staff to continue discussions regarding the maintenance and storage facility (MSF) with UTSC; to undertake an Environmental Assessment; and to report back on a Business Case and phasing plan.

In Q3 2021, the City retained a consultant team to assist in advancing the Eglinton East LRT toward a 10% level of design and TPAP Environmental Assessment. With support from TTC staff, constructability and baseline assessments are currently underway, including co-ordination with UTSC and with Metrolinx regarding the Line 2 East Extension interface and potential for a combined MSF with Line 5.

The City is currently updating the Business Case for the project, comparing the Eglinton East LRT with a 2041 base scenario for the corridor that includes Eglinton East RapidTO bus lanes. The results of this analysis, along with other project updates, will be reported to City Council in spring 2022.

Next Steps

The TTC continues to work collaboratively with partners to advance the transit expansion projects outlined in this report.

Staff will continue to report to the Board on progress of the transit expansion activities with a program update in fall 2022.

Contact

Yan He, Project Director – Transit Expansion Assurance
yan.he@ttc.ca

Signature

Kirsten Watson
Deputy Chief Executive Officer

Gary Downie
Chief Capital Officer

Attachments

- Appendix A Metrolinx Letter – Infrastructure Works for Queen Street Road Closure
- Appendix B Key Principles of the Subway Program Real Estate Protocol Agreement with Metrolinx for Provincial Priority Subway Program

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Appendix A

Metrolinx Letter – Infrastructure Works for Queen Street Road Closure



Office of the Chief Capital Officer
Matt Clark
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(416) 202- 3784

November 12, 2021

Sent by e-mail:

Tracey Cook
Deputy City Manager
Infrastructure and Development Services
City of Toronto
100 Queen Street West
Toronto, Ontario
M5H 2N2

Gary Downie
Chief Capital Officer
Engineering, Construction and Expansion
Toronto Transit Commission
1900 Yonge Street
Toronto, Ontario
M4S 1Z2

Dear Tracey and Gary,

Re: Infrastructure Works Required for Queen Street Road Closures to Enable Metrolinx Delivery of the Ontario Line Project

The purpose of this letter (this "Letter") is to confirm the mutual intentions and understandings of Metrolinx, the City of Toronto (the "City") and the Toronto Transit Commission (the "TTC") (each a "Party" and collectively, the "Parties") to negotiate a binding tri-partite agreement (the "Agreement") to commence the "Work" (as defined below) and overall support for the Queen Street Road Closure. The Parties acknowledge this Letter does not create a contract or impose obligations on the Parties and that they are proceeding under this Letter at their own risk and cost while authority is sought to negotiate and enter into the Agreement.

The Parties will proceed with the Work in good faith with the expectation that all necessary authorities to undertake the Work will be sought. In addition to the granted Metrolinx authority, it is Metrolinx's understanding that City staff will be seeking necessary City Council authorities through a City staff report, to negotiate and enter into an agreement that formalizes the roles and responsibilities articulated in this Letter. Subject to obtaining the necessary authorities, the Parties will work collaboratively to finalize the Agreement, incorporating the terms of this Letter, and other terms and conditions as agreed, funding

obligations and milestone payment schedules as soon as possible, and in no event later than March 2022 when construction of the Work is scheduled to start on the Queen Streetcar Diversion. With input and coordination from the City and TTC, Metrolinx will develop an integrated delivery schedule for the overall Queen Street Closure.

The following input is required from the City and TTC:

TTC input and deliverables

- Design milestones of special trackwork, including track castings and tangent trackwork; Procurement, delivery and installation milestones for special trackwork and tangent trackwork
- Design handover/exchange dates for Overhead Catenary System (OCS) support poles, pole locations between parties;
- Construction milestone dates for OCS installation and commissioning; and
- Identification of, and compliance with, required governance to negotiate and enter into the Agreement.

City input and deliverables

- Confirmation of the original scope and project delivery schedule for the Adelaide Reconstruction Project;
- Scope, design and construction milestones for the proposed accelerated components to be delivered with the Queen Streetcar Detour;
- Scope, design and construction milestones for the proposed deferred components of the Adelaide Reconstruction Project; and
- Identification of, and compliance with, required governance to negotiate and enter into the Agreement once Council authority is received.

The above schedule input from the City and TTC is required in draft form by November 30, 2021, to continue to support design and schedule development and in final form by January 10, 2022, to allow for the development and completion of the Agreement.

Toronto City Council approval is sought for Queen Street to be closed long term to all vehicular traffic and transit access from Bay Street to Victoria Street (the "Closure") starting Q2 2023. The Work is required to minimize the impact of the Closure (full or partial) on City and TTC operations. The Closure and diversion of TTC streetcar routes is illustrated below in Figure 1.

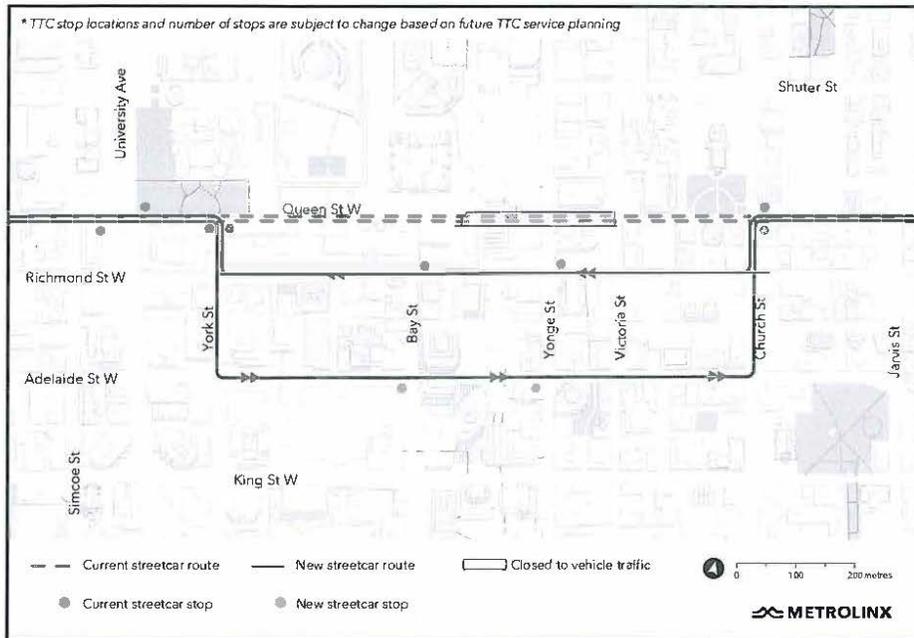


Figure 1: Queen Street Closure and Diversion

Failure to complete the Work in accordance with the target delivery dates will impact TTC's operations, including, requiring replacement bus bridging service specifically to accommodate the Closure. The Parties understand that costs for the 501 Queen replacement bus directly related to the Closure will be determined by Q2 2022, as work continues on the development of a broader policy between the Parties.

This Letter outlines the key terms that will be incorporated into the Agreement, and sets out the general roles and responsibilities of the Parties to deliver the Work. This Letter and the Agreement are only intended to cover the Work outlined below. Any other work associated with the Closure, including but not limited to, construction of the Ontario Line Project at Line 1 - Queen Station, is not part of the Work and will be addressed in future agreements between the Parties, as required.

The Work

The "Work" includes:

- Modification of York Street, including lane marking modifications (between Queen Street West and King Street West), utility relocations, and utility pole installation, to accommodate the restoration of the southbound streetcar tracks between Queen Street West and Adelaide Street West;
- Accelerated components of the City's Adelaide Reconstruction project from York Street to Church Street; and
- Reinstatement of streetcar infrastructure to support the 501 streetcar detour, which includes:
 - Restoration of the eastbound streetcar track, overhead, power supplies and signaling on Adelaide Street, from Charlotte Street to Victoria Street;
 - Restoration of the southbound streetcar track, overhead, power supplies and signaling on York Street, from Queen Street to Adelaide Street; and
 - Restoration of the streetcar special trackwork, along with associated power supplies and signaling for the following streetcar movements:
 - east to south, and straight eastbound, at Adelaide and Charlotte;
 - east to north, south to east, north to east, and straight eastbound, at Adelaide and York;
 - straight eastbound at Adelaide and Victoria; and
 - east to south, and straight eastbound, at Queen and York.

Roles and Responsibilities

The Agreement will also outline the roles and responsibilities of the Parties, set out at a high level below.

Metrolinx will be responsible for undertaking the following components of the Work:

- Delivering the York Street Detour scope of modifications in consultation with the City and TTC, to applicable standards as agreed to by the parties;
- Delivering and installing infrastructure works related to installing new streetcar tracks on York Street, with connections to existing work on Queen Street and future improvements on Adelaide Street; and
- Coordinating and resolving certain conflicts with other utility work required to facilitate the installation of York Street and Adelaide Street tracks.

The City will be responsible for undertaking the following components of the Work:

- Delivering the Adelaide Reconstruction project and identifying opportunities for accelerating components from York Street to Church Street to connect with the planned streetcar track on York Street and Adelaide Street between Charlotte Street and Victoria Street, in a timely manner such that the detour is operational for the scheduled closure of Queen Street, including, a review of schedule mitigation options for delivery of the streetcar tracks; and
- Owning, maintaining and operating City infrastructure delivered as part of the Work, once accepted by the City.

The TTC will be responsible for undertaking the following components of the Work:

- Designing, procuring, and installing TTC infrastructure (excluding concrete) associated with York Street and Adelaide Street streetcar tracks;
- Isolating and decommissioning streetcar OCS on Queen Street between Victoria Street and York Street and reinstatement after restoration;
- Maintaining and operating TTC infrastructure on York Street and Adelaide Street, once accepted by the TTC;
- Restoration of OCS upon completion of both York and Adelaide;
- Ownership and maintenance of TTC infrastructure associated with the Work; and
- Planning, coordinating and providing replacement bus bridging in the event the Adelaide Street and York Street TTC track work is not completed at the time of the Closure.

Metrolinx acknowledges that temporary road occupancy and street work permits on the public highways will comply with the processes and requirements set out in the relevant City by-laws, including Chapter 743 of Toronto Municipal Code, Use of Streets and Sidewalks.

Funding Commitment: Infrastructure Works Required for the Closure

Metrolinx will be responsible for the cost of the Work listed below, which is subject to change prior to the execution of the Agreement by the Parties:

- Civil work directly related to York Street per the Work.
- Cost for the TTC track installation on York Street and Adelaide Street from Charlotte Street to Victoria Street, as follows:
 - design and fabrication of the streetcar track on York Street and Adelaide Street, the installation of track and the OCS;
 - costs associated with isolation and decommissioning of streetcar OCS on Queen Street between Church Street and York Street;
 - restoration cost of the OCS and traction power on both York Street and Adelaide Street;
 - all cost associated with design, procurement of material, track and OCS installation, and surface diversion cost to allow for the construction of tracks on York Street and Adelaide Street; and
 - Restoration cost associated with the Closure work from Bay to Victoria including OCS and traction power.
- Applicable incremental costs associated with the City's acceleration of the Adelaide Reconstruction project from York Street to Church Street, which will be determined and itemized in the Agreement.
- Applicable costs associated with coordination with other utility work required to facilitate the installation of York Street and Adelaide Street tracks, which will be determined and itemized in the Agreement.

Next Steps

Metrolinx understands that City staff will be seeking City Council authority in December 2021 to negotiate and enter into the Agreement as soon as possible, but no later than the Q2 2022 commencement of the Work. For clarity, this Letter does not create a contract or impose obligations on the Parties; however, sets out the intentions of the Parties prior to entering into the Agreement. Such definitive obligations shall arise only upon the completion and execution of the Agreement as referenced in the first paragraph above.

For any additional information or clarification, please do not hesitate to contact Richard Tucker, Vice President, Subway Project Delivery - Ontario Line, at 416-473-3279.

Sincerely,



Matt Clark
Chief Capital Officer

cc: Phil Verster, President & Chief Executive Officer, Metrolinx
Karla Avis-Birch, Chief Planning Officer, Metrolinx
Andrew Hope, Executive Vice President, Subway Program Delivery, Metrolinx
Richard Tucker, Vice President, Subway Project Delivery - Ontario Line, Metrolinx
Malcolm MacKay, Program Sponsor, Ontario Line, Metrolinx

Derrick Toigo, Executive Director, Transit Expansion Office, City of Toronto
Michael D'Andrea, Chief Engineer & Executive Director, Engineering & Construction Services, City of Toronto
Barbara Gray, General Manager, Transportation Services, City of Toronto

Rick Leary, Chief Executive Officer, Toronto Transit Commission
Kirsten Watson, Deputy Chief Executive Officer, Toronto Transit Commission
Yan He, Project Director, Toronto Transit Commission

Appendix B
Key Principles of the Subway Program Real Estate Protocol Agreement with Metrolinx for Provincial Priority Subway Program

<p>Request to Acquire City Lands</p>	<p>Metrolinx shall identify all City Lands required for the Projects and shall advise the City and the TTC of such requirements, where TTC infrastructure and assets are located in the vicinity of the City Subway Lands, by way of a Property Requisition Form. The land acquisitions required for each Project shall be identified at no later than the thirty per cent (30%) design stage.</p> <p>The City will review Metrolinx requests for City Subway Lands and will determine if it wishes to retain ownership or other rights with respect to those lands, in particular if those lands have any proposed municipal purpose (including future development or redevelopment) or if those lands are income producing.</p> <p>If Metrolinx disagrees with the City’s decision not to transfer particular City Subway Lands, or if Metrolinx cannot accommodate the City’s request to retain particular rights within the City Subway Lands being transferred, the issue will be escalated to the dispute resolution protocol contained in the Protocol.</p> <p>Metrolinx may exercise its rights under the <i>Expropriations Act</i> at any point, at which point the City can rely on all rights set out under the <i>Expropriations Act</i>.</p>
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