



Transit Network Expansion

Date: February 10, 2021
To: TTC Board
From: Deputy Chief Executive Officer
Chief Capital Officer

Summary

The TTC and its partners at Metrolinx, Infrastructure Ontario, the Province of Ontario, and the City of Toronto are in the midst of the largest transit network expansion program in decades. The TTC continues to play a key role in the planning, technical review, and implementation of all major transit expansion projects in Toronto and the region. These include the Toronto Light Rail Transit Program and the provincial priority subway projects, referred to collectively as the “Subways Program”: the Ontario Line; the Scarborough Subway Extension; the Yonge North Subway Extension; and the Eglinton Crosstown West Extension.

By 2031, the TTC will operate a network of six subway and light rail transit lines and is expected to maintain the track, track and tunnel infrastructure, system wide systems, and fleet for the extensions to Lines 1 and 2. The TTC is in discussions with Metrolinx on roles and responsibilities for maintenance of stations infrastructure on the extensions to Lines 1 and 2 which will be evaluated through a business case analysis.

The TTC is closely involved in all major transit projects in the City of Toronto during project delivery through provision of alternate service to manage route diversions and with transit development in adjacent municipalities recognizing links to existing and planned future TTC service. Safety, accessibility, and customer service will always be at the core of TTC operations.

The TTC is responsible for the TTC customer experience and for a seamless end-to-end customer journey during transit expansion project delivery and as the network operator when the new line or line extension opens for service. Throughout 2021 the TTC is readying operations for the opening of Line 5 Eglinton in 2022. Key actions being taken by the TTC to operationalize Line 5 and the TTC’s involvement in 11 other major transit expansion projects are outlined in this report.

To ensure the TTC is adequately resourced to provide the technical expertise and input required to advance the development of the Subways Program, it is recommended the Board authorize the TTC to enter into a resource agreement with Metrolinx. The agreement will cover the term of 2021 to 2025. The report also seeks authorization to

add new complement at net zero cost to the TTC, subject to executing an agreement with Metrolinx.

Once in place, this resource agreement will fund the TTC's newly created Transit Expansion Assurance Department within the TTC's Engineering Construction and Expansion group which will ensure that new expansion projects meet TTC transit expansion and integration requirements. While this group is being formed, assurance is being managed concurrently by the TTC's Engineering Construction and Expansion, Operations, and Strategy and Customer Experience groups in lockstep to ensure delivery of safe and reliable customer journeys on a network level.

This report provides an update on the progress of major TTC network expansion projects and programs being undertaken and on the governance structure underpinning their successful delivery. Details are included in Appendix 2.0 – Transit Expansion Project Status Update which articulates the TTC's key interests as the TTC works toward alignment with government partners on these projects. These key TTC interests will guide the TTC's position in Operating and Maintenance (O&M) responsibilities discussions with Metrolinx and staff will report back to Board on the outcome.

Recommendations

It is recommended that the TTC Board,

1. Authorize the Chief Executive Officer to execute a Subway Program Resource Agreement between the TTC and Metrolinx, including terms to have Metrolinx fund temporary staff positions in support of the Subway Program for the period from 2020 to 2025 and renewable in subsequent years.
2. Request City Council authorization to amend the 2021 TTC Operating Budget to:
 - a. Increase authorized complement by 34 temporary positions representing fully dedicated core resourcing for the Metrolinx subway expansion program, with 2021 gross expenses up to \$7.78 million and \$0 net, with these roles and associated costs fully funded by Metrolinx.
 - b. Delegate authority to the Interim Chief Financial Officer, to authorize additional temporary positions in order to flexibly respond to the resource requirements of the Metrolinx Subway Program, subject to the following conditions:
 1. Confirmation is received that the 2021 subway expansion program work requires the addition of net new complement to support the work;
 2. Metrolinx agrees to fully fund all costs associated with the additional positions; and,
 3. Changes to authorized complement and gross expenses under this delegated authority are reported throughout 2021 as part of quarterly variance reports.
3. Authorize 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.

4. Request Metrolinx to conduct meaningful engagement 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.
5. Direct staff to ensure all Members of City Council receive a copy of the report.
6. Direct staff to report back to the Board on the outcome of Operating and Maintenance roles and responsibilities discussions for the Provincial Subway Program.

Financial Summary

Financial Impacts of Provincial Subways Program Planning and Development Phase

As has been previously reported, on July 23, 2019 the Province enacted a regulation (*O. Reg 248/19*) that designated 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 related to the three transit expansion projects were reassigned to Metrolinx from the TTC, as a result of the Province's legislated authority to transfer assets, liabilities, rights and obligations related to the projects from the TTC to Metrolinx. TTC costs up to August 31, 2019 for these projects totaled \$239 million for which full funding was previously received by the TTC from the City. The Province has in turn committed to reimbursing the City for these amounts, pending a review which has not yet been finalized.

Project Assurance Financial Implications

The TTC incurs costs associated with its project assurance role, requiring technical reviews and project monitoring during the project delivery phase of transit expansion projects. This is to ensure projects meet TTC standards and requirements including integration.

To support the planning and development of the Province's priority subway expansion program, Metrolinx confirmed in an October 19, 2019 Letter of Comfort from its Chief Capital Officer that it would agree to cover the full cost of TTC staff time. Full recovery of TTC costs incurred since September 1, 2019 is expected.

This report recommends the Chief Executive Officer be authorized to enter into a resource agreement for the Term of 2021-2025 to address TTC resource requirements to undertake Metrolinx work for the Provincial Subways Program. Required TTC support for the Provincial Subways Program has been a matter of considerable review between TTC and Metrolinx.

Metrolinx has committed to fully funding costs associated with 34 dedicated temporary staff positions over the period 2021 to 2025. Additional resources have been identified that may be required to support the Provincial Subways Program based on project requirements which will be evaluated against Metrolinx work plans for the projects. Costs associated with these positions will be charged to Metrolinx on the basis of time incurred and Metrolinx will provide workplans in advance to facilitate appropriate resourcing. For roles where the resource requirement is either temporary or not full-time, consultant or contract resources may be used in place of TTC staff. The TTC and Metrolinx will review resource requirements annually.

Based on identified and agreed requirements, this report requests that TTC's 2021 Operating Budget be amended to increase gross expenditures by \$7.78 million and \$0 net to reflect the addition of 34 temporary positions. This amendment is equivalent to the dedicated resourcing that Metrolinx has agreed to fund in full and includes a \$0.5 million contingency to reflect the fact that some roles may need to be filled with consultant resources at potentially higher costs, based on market conditions and project requirements.

In addition, the report delegates authority to the Interim Chief Financial Officer to authorize a further increase in complement and gross costs if:

1. Confirmation is received that the 2021 subway program work requirements require the addition of net new complement to support the work, and
2. Metrolinx agrees to fully fund all costs associated with the positions.

Any changes authorized under this delegated authority would be reported to the Board in quarterly financial variance reports in 2021.

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

Equity/Accessibility Matters

The TTC believes that all customers should enjoy the freedom, independence, and flexibility to travel anywhere on its transit system. The TTC is working to make the TTC barrier free and TTC services and facilities accessible. The TTC's commitment to providing safe, reliable, accessible, and inclusive service is also at the forefront of its 2018-2022 Corporate Plan. Through input into the Project Agreements and Project Specific Output Specifications (PSOS), the TTC has requested that Metrolinx engage in meaningful consultation with the TTC's Advisory Committee on Accessible Transit (ACAT) as part of project design review at early stages of each initiative.

The transit expansion projects described in this report will expand the rapid transit network in Toronto providing new, accessible rapid transit on already busy corridors such as Eglinton Avenue and Finch Avenue West. The Provincial Subway Program will extend Line 1, Line 2, and Line 5 to serve more residents and jobs while introducing the Ontario Line to provide better mobility and reduced crowding in the busiest part of the network.

The overall transit expansion program will provide greater access to transit in equity-seeking areas of the city. 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 journey 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, broadening the Family of Services.

Decision History

In April 2019, the TTC Board received a report for information, *City of Toronto Report EX4.1: Toronto Transit Expansion Program- Update and Next Steps*. The report provided a comprehensive update on all transit expansion projects in development. The report also established priorities for new funding available under the Investing in Canada Infrastructure Plan (ICIP), which included the Bloor Yonge – Capacity Improvement Project. Direction was also given to advance other key projects including the Eglinton East LRT and Waterfront Transit.

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2019/April_11/Reports/16_City_of_Toronto_Report_Toronto%27s_Transit_Expansion_Program.pdf

Provincial LRT Program

In 2012, the Master Agreement for the Implementation of the Toronto Light Rail Transit Program was signed between Metrolinx, the City of Toronto and the TTC. The TTC is the owner and/or the operator of the TTC Infrastructure at the Interchange Stations and the proposed future operator of the LRTs pursuant to a contract to be entered into by Metrolinx and the TTC. In this agreement, it was determined that the TTC would be responsible for the operations, fare inspection and transit enforcement, customer service interfaces at stations, amongst other important roles.

Master Agreement For the Implementation of the Toronto Light Rail Transit Program
http://www.metrolinx.com/en/projectsandprograms/transitexpansionprojects/Master_Agreement_Nov_28_2012.pdf

The Board received a confidential verbal presentation regarding this 2012 Master Agreement with Metrolinx in September 2012.

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2012/September_27/Reports/Master_Agreement_wit.pdf

In 2016, the Province of Ontario and the City of Toronto signed the Agreement in Principle (AIP), which secured capital and lifecycle maintenance funding from the Province, with the City of Toronto taking responsibility for operating and routine maintenance funding. The AIP also stipulated that the City of Toronto, and its agency,

the TTC, was to receive 100% of the farebox and non-farebox revenue, to assist in offsetting operating and maintenance costs.

- Agreement in Principle <https://www.toronto.ca/wp-content/uploads/2020/08/944f-20180111-AIP-FINAL.pdf>
- November 2016 – Council approval of the AIP (EX19.1 Transit Network Plan Update and Financial Strategy)
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.EX19.1>

Provincial Subway Priorities

On April 10, 2019, and in the April 11, 2019 release of the 2019 Ontario Budget, the Province outlined a new transit proposal that included four priorities for the Province. Specifically, an extended version of the Relief Line (“Ontario Line”), a three-stop Line 2 East Extension (“Scarborough Subway Extension”), the Line 1 Yonge Extension to Richmond Hill Centre (“Yonge North Subway Extension”), and a tunneled Line 5 West Extension to Renforth (“Eglinton Crosstown West Extension”).

Updates to the TTC Board on the Province’s transit proposal released in the 2019 Ontario Budget, were provided through the CEO’s report to the Board and transmitted reports from the City of Toronto, including:

- June 12, 2019, City of Toronto Report EX6.5: Status Update – Toronto-Ontario Transit Responsibilities Realignment Review
- [http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2019/June 12/Reports/19_EX6.5 Status Update Toronto Ontario Transit Responsibilit.pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2019/June%2012/Reports/19_EX6.5_Status_Update_Toronto_Ontario_Transit_Responsibilit.pdf)
- July 10, 2020, TTC CEO Report
[http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2019/July 10/Reports/1_CEO_Report_July_Update.pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2019/July%2010/Reports/1_CEO_Report_July_Update.pdf)
- September 24, 2019, TTC CEO Report
[http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2019/September 24/Reports/1_CEO_Report_September_2019_Update .pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2019/September%2024/Reports/1_CEO_Report_September_2019_Update.pdf)

In October 2019, the TTC Board received a report for information, City of Toronto Report (EX9.1) Toronto-Ontario Transit Update. Through this report, Toronto City Council authorized the City Manager, in consultation with the Chief Executive Officer, TTC to negotiate, and enter in to and execute an agreement (the “Preliminary Agreement”) with the Province and/or any other relevant provincial agency, in accordance with the terms set out in the term sheet attached as Attachment 6 to the report. The agreement outlined new roles and responsibilities with respect to the Province’s priority subway projects and resolved that the existing TTC subway network would remain an asset of the City of Toronto. In addition, City Council passed a number of directives, which include but are not limited to the following:

- City Council confirmed its position that capacity and reliability improvements on Line 1 remain a top priority for future capital investment (*Directive #14*);

- City Council affirmed its support for the maintenance of new and existing lines to be done by the TTC (*Directive #25*);
- City Council directed staff as part of work with Metrolinx on the Ontario Line, to ensure that: (a) there is full and affordable fare integration between all lines, systems and technologies, including a single fare for rides within the City of Toronto; (b) fares not be established based on distance; and (c) fares for any new lines be established by the TTC Board.

https://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Commission_meetings/2019/October_24/Reports/11_City_of_Toronto_Report_EX9_1_Toronto-Ontario_Transit_Upda.pdf

The Preliminary Agreement referenced in the October 2019 report above, was entered into by the City Manager and the Deputy Minister, Ministry of Transportation on November 4, 2019. Some of the key terms of the Preliminary Agreement pertaining to the TTC and the Metrolinx Subway Program include:

- “(Term 17) City/TTC will be responsible for the day-to-day operations of the Provincial Projects and the existing transit system, including in respect of labour relations.
- (Term 18) The arrangement between the Province and the City related to operations of the Provincial Projects will reflect the following core terms:
 - Farebox revenue from the Provincial Projects will be applied to defray operating costs;
 - In respect of a Provincial Project that extends beyond the boundary of the City to another municipality, the Province will negotiate with the relevant neighbouring municipality to secure an ongoing operating contribution, commensurate with the level of subway service provided in that municipality and,
 - Subject to 18. (a) and (b), above, any net subsidy required to operate each of the Provincial Projects will be the responsibility of the City.
- (Term 19) The Province will define with the City, through ‘Operating & Maintenance (O&M) Agreements’ for the Provincial Projects, the specific roles and responsibilities of the parties, including (but not limited) to: (a) The performance of all maintenance functions; and, (b) The associated funding responsibilities of all maintenance functions.”

Link: <https://www.toronto.ca/wp-content/uploads/2020/02/94f1-02-12-2020-Final-Prelim-Agreement-Ontario-Toronto-Transit-Partnership-AODA.pdf>

Issue Background

The TTC continues to work with key partners including Metrolinx, Infrastructure Ontario, York Region and key divisions at the City to advance the transit expansion projects outlined in the report that will grow Toronto’s transit network in the next decade. As the network operator, the TTC is responsible for customer experience and for a seamless

end-to-end customer journey during transit expansion project delivery and once the new transit line opens for service.

Transit expansion programs such as the Metrolinx Subway Program and Metrolinx LRT Program are governed by an Toronto-Ontario Governance Framework which includes an Executive Committee with executive level representation from the TTC, City of Toronto, Metrolinx, Infrastructure Ontario and the Ministry of Transportation. Program and project level steering committees have also been established to provide coordination and oversight of the work. The TTC uses these forums to advance the interests of the TTC in accordance with Board direction.

Updates on the TTC's roles in individual major transit expansion programs and projects are described in this report and with greater detail in Appendix 2.0.

Comments

Toronto Rapid Transit Network Expansion

Major expansion to the transit network is underway through the planning and delivery of many significant projects including these five key programs:

1. **Priority TTC Capacity Enhancement:** TTC capital programs that address critical capacity issues on the existing network, primarily at the Bloor-Yonge Station interchange
2. **Provincial LRT Program:** introduces new light rail transit lines on Eglinton Avenue and Finch Avenue West, a program near completion with lines opening between 2022 and 2023
3. **Provincial Subway Program:** announced by the Province of Ontario in 2019, includes two projects to extend existing TTC subway lines, one project to extend an under construction light rail line, and one new subway line.
4. **Priority City Expansion:** these projects will expand the TTC streetcar network to new areas in the waterfront and extend the light rail into east Scarborough and Malvern
5. **Bus Rapid Transit (BRT):** the RapidTO project would significantly improve reliability, speed and capacity on busy surface transit corridors in Toronto. Two additional regional bus rapid transit projects would improve cross-boundary connections and make transit better for TTC and regional bus customers.

The five transit network expansion programs are described in table 2.0 Rapid Transit Network Expansion Projects and Programs and are mapped in Figure 1.0 Transit Expansion Projects in Toronto.

Additional project details are in Appendix 2.0 – Transit Expansion Project Status Update.

Table 2.0 Rapid Transit Network Expansion Projects and Programs

TTC Line	Program	Project	Current Phase	Anticipated In-Service	Details – Appendix 2.0
Line 1 Yonge-University and Line 2 Bloor-Danforth	Priority TTC Capacity Enhancement	Bloor-Yonge Capacity Improvement Project	Design	2029**	1.1 Page 24
Line 5 Eglinton	Provincial LRT Program	Eglinton Crosstown	Construction	2022*	1.5 Page 36
Line 6 Finch West		Finch West LRT	Construction	2023*	1.8 Page 46
Line 1 Yonge-University	Provincial Subway Program	Yonge North Subway Extension	Planning	2029-2030*	1.2 Page 30
Line 2 Bloor-Danforth		Scarborough Subway Extension	Advance Tunnel Contract: Procurement; Stations/Systems, Planning	2029-2030*	1.3 Page 31
Future Line 3		Ontario Line	Planning/ Procurement	2030*	1.4 Page 34
Line 5 Eglinton		Eglinton Crosstown West Extension	Advanced Tunnel Contract: Procurement; Stations/Systems, Planning	2030-2031*	1.6 Page 43
Line 5 Eglinton	Priority City Expansion	Eglinton East LRT Extension	Planning	TBD	1.7 Page 44
Various streetcar routes		Waterfront Transit - Waterfront East	Preliminary Design and Engineering	TBD	1.9 Page 47
Various TTC bus routes	Bus Rapid Transit (BRT)	RapidTO on busy bus corridors	Implementation and Planning	2020 and TBD	1.10 Page 49
Various TTC and regional bus routes		Durham – Scarborough BRT	Preliminary Design	TBD	1.11 Page 49
		Dundas BRT	Concept Definition	TBD	1.12 Page 51

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

Figure 1.0 Transit Expansion Projects in Toronto



Customers are at the Centre of the TTC Network Expansion

Any rapid transit network with an objective to support economic growth depends on a safe, reliable, and seamless customer journey. These transit expansion projects will increase the number and geographic coverage of accessible transit services and facilities in Toronto and will provide new rapid transit to serve communities and residents of Neighbourhood Improvement Areas (NIAs).

The rapid transit network will reach more customers, and will move more people than is now possible on the TTC system. Key parts of the expansion program will free up capacity on existing lines, further increasing mobility and system capacity. The speed and reliability of transit service will be improved, and additional transit customers will be attracted by this to the TTC network. The benefits of the expansion will expand beyond the immediate areas of the specific projects. Excellent connections between the existing network and the new lines/line extensions will be critical to achieving the benefits of improved customer mobility. Preserving and improving the customer experience is a key principle guiding the TTC's work with transit expansion partners.

Inter Regional Connections

All of the network expansion projects make transit service better in Toronto and improve connections to and integration with the broader regional transit network. Being at the heart of the TTC subway network, the Bloor-Yonge project is crucial to moving people on the region's two busiest transit lines. The Line 1, Line 2 and Line 5 extensions and the Ontario Line project would have direct connections with the regional transit network including GO Transit and partners from Durham Region Transit, MiWay, Brampton Transit and York Region Transit.

The bus rapid transit projects would improve bus service for customers in Toronto and travelling across municipal boundaries. The waterfront projects would connect with the regional transit hub at Union Station and would move people from all over the region to and from Toronto's waterfront. In addition to these projects that would expand or improve the TTC network, connections would be provided between the TTC rapid transit, streetcar and bus network with the new GO stations that are planned as part of the GO Expansion and SmartTrack projects.

Existing and Under Construction Toronto Rapid Transit Lines

Figure 2.0 shows the TTC rapid transit network as of 2023 when Line 5 Eglinton and Line 6 Finch West have opened.

Figure 3.0 shows how the TTC rapid transit network could be after 2031, when the four provincial subway projects and the waterfront streetcar projects are planned to have opened.

Figure 2.0 TTC Rapid Transit Map – 2023 when Line 5 Eglinton and Line 6 Finch West have opened



1. Priority TTC Capacity Enhancement

1.1 Bloor-Yonge Capacity Improvement Project

The Bloor-Yonge Capacity Improvement project is a critical component of addressing capacity constraints on Line 1. The projected growth in the City of Toronto and surrounding jurisdictions, planned transit expansion programs, as well as the expected higher density in the area will impact Bloor-Yonge subway station. The station currently experiences the following issues:

- Overcrowding of the Line 2 platform due to substandard platform width and congested vertical circulation in the AM and PM peak hours
- Overcrowding of the Line 1 platforms due to poor passenger distribution leading to congestion and queuing at vertical circulation in the AM and PM peak hour
- Overcrowding of Lines 1 and 2 platforms AM and PM peak hour hampering alighting and boarding leading to the increase in dwell time for trains

Projected ridership growth will increase current deficiencies in station performance. Even with the implementation of the Ontario Line, capacity improvement is required before the Line 1 extension to Richmond Hill is in service. The recommended approach to address the expected ridership growth involves the following scope with a planned opening of the new Line 2 platform in 2029 before the Line 1 extension by Metrolinx/ Infrastructure Ontario.

- New second platform Line 2 (Eastbound)
- Expansion of Line 1 northbound and southbound platforms
- New substation
- Five new fan plants
- Vertical circulation elements: escalators, elevators, stairs
- New entrance and fare line
- Associated utilities and finishes

The Bloor-Yonge Capacity Improvement project is presently advancing to stage gate 3. All three orders of government have committed to fund the project under the Investing in Canada Infrastructure Plan - Public Transit Infrastructure Stream (ICIP-PTIS). The TTC in partnership with City is working to secure a Transfer Payment Agreement (TPA) for the project under the funding program and is developing an updated business case for the project in accordance with ICIP-PTIS funding program requirements. Additional project details are in Appendix 2.0.

1.2 Line 1 and Line 2 Capacity Enhancement Program

A priority for the TTC and the City, the Line 1 and Line 2 Capacity Enhancement Programs are a vital body of planning, engineering, and operational design work that is crucial to moving customers effectively on the TTC subway network. This TTC program will identify and deliver a significant suite of enhancements that will allow more frequent subway service to be operated on both lines. The comprehensive program is designed to deliver sufficient capacity to meet projected demand well into the future, and to

ensure that additional ridership from increased development, a growing Toronto population, and the subway expansion projects can be safely and effectively accommodated.

The Line 1 and Line 2 Capacity Enhancement Programs depend on effective interface management with internal and external stakeholders. Integration, collaboration and alignment of efforts is imperative for efficient, effective and timely success of program objectives to increase capacity. The Line 1 and Line 2 Capacity Enhancement Programs are actively identifying project interdependencies within the TTC as well as third party stakeholders including provincial expansion projects.

Interdependencies include but are not limited to:

- impact to existing terminal and interchange stations
- turnback operation
- electrical traction power
- fire ventilation and train control systems
- train storage and maintenance requirements, as well as
- station capacities

These are all an integral part of the existing subway operating environment that are dependant and/or require integration and interface management with expansion projects.

Program integration processes and tools are required to identify and track these interdependencies and interfaces supported with interface registers and regular working group sessions. These issues are being carefully evaluated and coordinated by TTC staff, working with staff in the City, at Metrolinx, and Infrastructure Ontario. Additional project details are in Appendix 2.0.

2. Provincial LRT Program

Line 5 Eglinton (also referred to as the Crosstown LRT) – will open for service in 2022 with the official in-service date being communicated by Metrolinx. Once operational, Line 5 Eglinton will allow the TTC to move more customers more reliably with enhanced accessibility along the Eglinton corridor with key points of intersection with Lines 1 and 2 and many bus routes.

To ensure operational readiness on Day 1, the TTC's dedicated LRT Operations department is working closely with Metrolinx and their contractors, Crosstown Transit Solutions (CTS) and Mosaic Transit Group (MTG), to support the development of an LRT Rulebook, Standard Operating Procedures (SOPs), and Training Curriculum. In addition, LRT Operations is working with TTC stakeholders to develop resource plans and station evacuation plans. The LRT Mobilization Plan has a particular focus on the introduction phase of LRT to the TTC network including a bus contingency plan which will allocate parallel bus service to offset any disruptions experienced in the first six (6) months of service and will also include provisions for shuttle buses similar to those used for subway service disruptions.

As well, LRT Operations is working closely with Metrolinx on the development of the Train Operator Service Agreement (TOSA), in accordance with principles established by City Council per the Toronto-Ontario Agreement in Principle, which will be completed in 2021.

In 2020 the TTC completed a preliminary LRT service schedule to support the validation of operator workforce. In 2021 the TTC will begin the development of its 2022 Annual Service Plan, which will include bus network changes as a result of the opening of Line 5. A community engagement strategy will be implemented for stakeholder input and feedback on these changes in mid-2021. Similar to Line 5, detailed planning work regarding bus route connections to Line 6 will begin in the year before that line opens, and customers and other stakeholders will also be consulted before final recommendations are presented to the Board.

Projects under the Toronto LRT Program are being delivered by Metrolinx and Infrastructure Ontario with Line 5 and 6 assets owned by the Province of Ontario. Once complete, the TTC will operate, staff stations, provide security and fare enforcement, and will be responsible for customer experience on both lines. CTS will be responsible for vehicle and infrastructure maintenance of Line 5 and MTG will be responsible for vehicle and infrastructure maintenance of Line 6. The City of Toronto will be responsible for funding the operations and day to day maintenance costs of both lines. Additional program details are in Appendix 2.0.

3. Provincial Subway Program

In April 2019, the Province of Ontario announced a new priority subway plan which included four projects, collectively known as the Provincial Subway Program, which includes the Yonge North Subway Extension project (Line 1 Yonge North), a three-stop Scarborough Subway Extension project (Line 2 East Extension), the Ontario Line project, and a largely below-grade Eglinton Crosstown West Extension project (Line 5 West Extension). Additional details of projects within the Provincial Subway Program are in Appendix 2.0 – Transit Expansion Project Status Update.

The TTC's expectation is that customers travelling on these new lines or on extensions to existing lines will experience a seamless journey that is consistent across the TTC network; comparable to travel on Line 1 north of Sheppard West Station after the opening of the Toronto-York Spadina Subway Extension Project (TYSSE). A seamless journey includes fares, wayfinding, customer experience, stations management, and network control operations among others that are consistent across the TTC network.

3.1 Provincial Subways Program Roles and Responsibilities

Clarity of roles and responsibilities during project delivery and upon operation is critical to the success of transit expansion within the City of Toronto.

Per the Preliminary Agreement signed by the City and Province, the City of Toronto will define with the Province through Operating and Maintenance (O&M) Agreements specific roles and responsibilities of the parties, including (but not limited) to:

- (a) The performance of all maintenance functions; and,
- (b) The associated funding responsibilities of all maintenance functions for the Provincial Subway Program

This alignment is important because it drives project requirements (e.g. the project design must conform with the TTC's Standards where the TTC will be the maintainer – those include Design Manual, Master Specifications and Standard and directive Drawings) and the TTC must be engaged to review all detailed design and planning document components of all aspects of the system that TTC will be responsible to maintain and operate.

To achieve this alignment, the TTC and Metrolinx are engaged at the working group level to define roles and responsibilities relevant to the performance of maintenance and operations functions of the Subway Program within the framework of the City-Province November 2019 Preliminary Agreement. The outputs of this work will inform further negotiations between the City and Province. TTC staff will also report to the Board.

Based on work to date, the TTC and Metrolinx are aligned that the TTC will maintain the track and tunnel, system wide systems, and fleet for the extensions to Lines 1 and 2. Roles and responsibilities for maintenance of stations infrastructure and components for the extensions to Lines 1 and 2 are being discussed and will be identified through a business case analysis.

O&M roles and responsibilities for the Line 5 extension are expected to be consistent with Line 5 Eglinton (Crosstown LRT).

For the Ontario Line as is noted above, discussions on O&M roles and responsibilities are taking place at the working group level within the transit expansion governance framework. Appendix 1.0, as proposed by the TTC to Metrolinx in January 2021, is an articulation of the roles and responsibilities between the parties for the operations of the Ontario Line.

3.2 TTC Provincial Subway Program Dependencies

3.2.1 Fleet

The provincial projects have a bearing on TTC fleet expansion and new rail maintenance, and storage facility plans. TTC new subway train procurement plans for existing lines will require modification to include additional trains funded by the Province for Line 1 Yonge extension and Line 2 East Extension. The larger train fleets will require a re-evaluation of TTC plans for the size and location of expanded subway maintenance facilities. Considerations by project are set out in Appendix 2.0.

3.2.2 Infrastructure

Plans to renew the TTC's signal system on Line 2 will require coordination with the signal system required for the Province's Line 2 extension project. The TTC's capacity

enhancement work on Line 1 will require modification to account for the expanded subway system and changed passenger demand arising from both the Line 1 extension project and the Ontario Line project. Other important state of good repair work on the TTC's subway system must be planned and coordinated to align with the line extensions being planned by the province.

3.2.3 Facility Planning

The Line 1 and Line 2 Capacity Enhancement Programs have identified the need for additional subway vehicle storage and maintenance capacity as a result of increased demand due to future growth in ridership as well as the Line 1 Yonge North Subway Extension and Line 2 East Extension that cannot be accommodated by existing facilities.

The additional trains required for growth and expansion, the train fleet locations and the operating concept are dependent on planned service levels, integral to the existing system and interdependent with future expansion plans.

The Program teams are working collaboratively with Metrolinx and other third party stakeholders to define the service planning criteria and fleet size, as well as review of storage and maintenance concepts to address these shortfalls. This includes assessing requirements for a proposed new train maintenance and storage facility for Line 1 which will connect with Yonge north subway corridor as well as upgrades to the TTC Greenwood Yard for Line 2.

4. Priority City Expansion

4.1 Line 5 Eglinton East Extension

The Eglinton East LRT extension would build an easterly extension of Line 5 Eglinton from Kennedy Station along Eglinton Avenue East, Kingston Road, Morningside Avenue, through the University of Toronto Scarborough campus, and then along Sheppard Avenue and Neilson Road to Malvern Town Centre. It is presently unfunded.

Once complete, the line would replace the bus services currently operated by the TTC on the Eglinton RapidTO bus rapid transit corridor. The proposed stops on Line 5 would be in similar locations to the RapidTO bus stops. The extension would bring new rapid transit to key parts of Scarborough, and would improve access to rapid transit and the reliability of transit service for many existing and future TTC customers.

City of Toronto staff, working with TTC staff, updated the design and cost estimate for the project and presented it to City Council in December 2020. A broader plan including an updated business case, funding, financing and potential phasing for the project, will be included in a subsequent report to Council. Project details are in Appendix 2.0.

4.2 Waterfront Transit

Several streetcar infrastructure projects, currently in the planning stages, would allow expansion of streetcar service to new areas of the waterfront, and permit increased and

improved streetcar service. These projects are being carried out jointly by the TTC, City of Toronto, and Waterfront Toronto.

The Waterfront Transit/East Bayfront project would introduce a new streetcar service operating eastwards from Union Station, along Queens Quay to Cherry Street. This is a priority transit project of the City of Toronto. The project is being coordinated with Metrolinx's plans for modifications to Union (railway) Station.

The TTC also completed the Preliminary Design and Engineering for the Exhibition-Dufferin Gate Streetcar Connection in early 2020, which was identified by the City and TTC as an early start to the Waterfront West LRT. This would connect waterfront streetcar service to the west end of the network, providing new service options.

The Exhibition Loop-Dufferin Gate Loop project would build a new streetcar connection between Exhibition Loop, on the north side of Exhibition Place, and Dufferin Gate Loop, on Dufferin Street north of the Dufferin Gate of Exhibition Place. The project is being coordinated with Metrolinx's plans for an Exhibition Station on the Ontario Line and is currently on hold until further details of the Ontario Line station, and other initiatives in the Exhibition Place and Ontario Place areas, are available. Project details are in Appendix 2.0.

5. 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.

5.1 RapidTO

The RapidTO program began in 2020 and has seen improvements successfully introduced on the Eglinton Avenue East/Kingston Road/Morningside Avenue corridor, one of the TTC's busiest. Consultation and further evaluation is under way on expanding these improvements to other busy bus corridors in Toronto. Buses 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 increased capacity 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. Project details are in Appendix 2.0.

5.2 Durham–Scarborough BRT and Dundas BRT

The Durham-Scarborough Bus Rapid Transit (DS-BRT) and the Dundas Bus Rapid Transit projects would be used by TTC buses as well as buses from the regional and GO transit systems, and would improve service for transit customers making both local and regional trips. Both regional projects are currently in the planning stages and would be delivered by the Province, working with the local municipalities. The detailed design

and stop locations have not been finalized. The next major milestone to be completed will be the detailed evaluation of the Province's recommended alignment and stop locations, and the development of a concept of operations. Project details are in Appendix 2.0.

6. Next Steps

The TTC continues to work collaboratively with partners to advance the transit expansion projects outlined in this report. Appendix 2.0 provides a comprehensive update on all transit expansion projects currently underway and identifies key interests of the TTC in each project.

On the LRT Program, a plan is in place to prepare the organization to operationalize Line 5 Eglinton (Crosstown LRT). On the provincial subways program, the TTC is working with Metrolinx to finalize advice on respective roles and responsibilities relating to operations and maintenance, and will report back to the Board on outcomes of these discussions. A Subway Program Master Agreement will also be developed, which will leverage appropriate precedents and lessons learned from the LRT Program Master Agreement. Staff will continue to report back to the Board on progress of the various transit expansion projects outlined in this report.

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Attachments

Appendix 1.0 TTC Proposal Ontario Line Operations Roles and Responsibilities
Appendix 2.0 Transit Expansion Project Updates

Appendix 1.0 TTC Proposal Ontario Line Operations Roles and Responsibilities

The following table has been proposed by the TTC to Metrolinx in January 2021 as an articulation of the roles and responsibilities between the parties for the operations of the Ontario Line.

Ontario Line – TTC View (Crosstown Model)		Responsible (delivery)	Consulted (review / advise)		
		Accountable (sign off/approve)	Informed (for information, no review)		
Functions	Operations Responsibility in the Operational Term	RSSOM	TTC	MX	
Operations	Operations of Trains	R/A	I	C	
	Staffing of OCC	I	R / A	C	
	OMSF Yard Operations	R	C	A	
	Cleaning of stations and Trains	R	C	A	
	Station Operations (e.g. vertical circulation control, dwell time management)	C	R	A	
	Opening and closing of stations	R	C	A	
	Service Plan (frequency, operating hours, etc.)	C	R / A	R / A	
	Provide bus substitution services during planned and unplanned service disruptions	I	R	A	
Safety and Security	Safety of Passengers (e.g. fire and life safety)	R	C	A	
	Special Constables to respond to security incidents (e.g. passenger and security related emergencies)	I	R / A	C	
	Security of infrastructure (e.g. access to guideway, monitor security incidents)	C	R	A	
	Security of EMSF	R	I	A	
	Staffing of SOO	I	R	A	
Customer service	Provision of digital Passenger information, including PA and PVIS (including information from interchanging transit)	C	R	A	
	Provision of face-to-face customer services	I	R	A	
	Provision of Passenger information from interchanging transit services	I	R	A	
	Media relations, including TV/radio interviews	I	R	A	
	Social media relations	I	R	A	
	Administration of Project Website	I	R	A	
	Customer enquiries, through email, customer service number or Passenger Assistance Intercom	C	R	A	
	Collection of lost property from infrastructure and trains	I	R	A	
Distribution of lost property to Passengers	I	R	A		
Fares	Fare Enforcement	I	R / A	I	
	Fare System installation and maintenance (TVM, fare gate control)	C	R / A	I	
	Fare Collection and backoffice (collect cash, distribute PRESTO cards, software updates)	C	R / A	I	

Appendix 2.0 Transit Expansion Project Updates

- 1.1 Bloor-Yonge Capacity Improvement Project..... 24
- 1.2 Line 1 Yonge Extension..... 30
- 1.3 Line 2 Bloor East Extension..... 31
- 1.4 Ontario Line Project..... 34
- 1.5 Line 5 Eglinton..... 36
- 1.6 Line 5 Eglinton West Extension 43
- 1.7 Line 5 Eglinton East Extension 44
- 1.8 Line 6 Finch West..... 46
- 1.9 Waterfront Toronto 47
- 1.10 RapidTO 49
- 1.11 Durham Scarborough Bus Rapid Transit (BRT) 49
- 1.12 Dundas Bus Rapid Transit (BRT) 51

1.1 Bloor-Yonge Capacity Improvement Project

Description

The Bloor-Yonge Capacity Improvement project is a critical component of addressing capacity constraints on Line 1. The projected growth in the City of Toronto and surrounding jurisdictions, planned transit expansion programs as well as the expected higher density in the area will impact Bloor-Yonge subway station. The station currently experiences the following issues:

- Overcrowding of the Line 2 platform due to substandard platform width and congested vertical circulation in the AM and PM peak hours
- Overcrowding of the Line 1 platforms due to poor passenger distribution leading to congestion and queuing at vertical circulation in the AM and PM peak hour
- Overcrowding of Lines 1 and 2 platforms AM and PM peak hour hampering alighting and boarding leading to the increase in dwell time for trains

Projected ridership growth will increase current deficiencies in station performance. Even with the implementation of the Ontario Line, capacity improvement is required before the Line 1 extension to Richmond Hill is in service. The recommended approach to address the expected ridership growth involves the following scope:

- New second platform Line 2 (Eastbound)
- Expansion of Line 1 Northbound and Southbound platforms
- New substation
- Five new fan plants
- Vertical circulation elements: escalators, elevators, stairs
- New entrance and fare line
- Associated utilities and finishes

Background

In May 2017, City Council requested the TTC to report on the status of plans to expand Bloor-Yonge interchange station, including estimated costs, timelines and potential capacity added to Line 1. At that time, City Council also confirmed the expansion of the station as a priority project for Provincial and Federal Funding.

In February 2018¹ the TTC reported on the events of January 30, 2018. and identified Bloor-Yonge as a longer term investment to address subway crowding relief.

In April 2019, Toronto City Council (EX4.1) endorsed the Bloor-Yonge Capacity Improvement Project as a priority project under the City of Toronto's funding allocation of the Investing in Canada Infrastructure Plan (ICIP) - Public Transit Infrastructure Stream (PTIS).

¹[http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2018/February 15/Reports/19 Events of January 30 2018 on Line 1.pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2018/February%2015/Reports/19%20Events%20of%20January%2030%202018%20on%20Line%201.pdf)

On August 26, 2019², the Government of Canada announced priority funding consideration would be given to the project and is setting aside \$0.5 B in federal funding through the ICIP-PTIS program, subject to conditions being met, including final approval by the Treasury Board.³

On February 12, 2020, the City and Province signed a Preliminary Agreement, in which the Province committed to endorse the project under the ICIP-PTIS program, and to fund one third of the total capital costs of the Bloor-Yonge Capacity Improvement Project. All three levels of government are expected to contribute towards the estimated \$1.5 billion project (Class 5 estimate). City Council approved funding for the municipal funding share of the project through the 2020 budget process.

Table 3.0 Bloor-Yonge Capacity Improvement Project

Background Project Information	
Project Management and Delivery	TTC – Engineering, Construction & Expansion
Asset Owner	TTC
Operator	TTC
Maintenance	TTC
Capital Funding	33% Federal (ICIP- PTIF2); 33% Provincial (ICIP- PTIS); 33% City of Toronto
Operating and Maintenance Funding	City of Toronto
Key Agreements	Ontario-Toronto Transit Partnership Preliminary Agreement (2020)
Project Status	
Current Project Lifecycle Phase	Preliminary Design & Engineering
Capital Cost Estimate	\$1.50 B (Class 5)
Schedule	2029*

* Targeted in-service date of new Line 2 platform

Project Update

The project is progressing towards Stage Gate 3 which will establish the baseline project performance criteria including scope, cost, schedule, risk, packaging, procurement method and updated business case.

² <https://www.canada.ca/en/office-infrastructure/news/2019/08/getting-torontonians-moving-making-crucial-investments-in-public-transit.html>

³ <https://www.canada.ca/en/office-infrastructure/news/2019/08/backgrounder-getting-torontonians-moving-making-crucial-investments-in-public-transit.html>

Discussions with adjacent property owners/developers commenced in 2019 and continued through 2020. The current design is being integrated with developers' plans and construction staging and phasing is currently being planned. The property acquisitions for the early works construction commenced in late 2020 and the main construction property acquisitions will commence in mid-2021. A draft 30% design has been completed and a Class 3 cost estimate is being finalized along with a Level 3 project schedule. A procurement options analysis including a comprehensive risk assessment and market sounding to determine the optimum project delivery method is nearing completion. In addition, third parties have been retained to complete a Value Engineering Assessment and prepare a project Business Case for submission at Stage Gate 3.

Upcoming Milestones

- Q2 2021: The baseline project performance criteria including scope, cost, schedule, risk, packaging, procurement method and refined business case will be established (Stage Gate 3 in the TTC Stage-Gating Framework);
- 2022: Early Works;
- 2024: Start of the primary works in 2024; and
- 2029: opening of the new Line 2 platform before the Line 1 extension by Metrolinx/Infrastructure Ontario

Figure 4.0 Bloor-Yonge Station Context



Figure 5.0 Bloor-Yonge Station Site Plan



Figure 6.0 Proposed Platform Expansion and Support Facilities

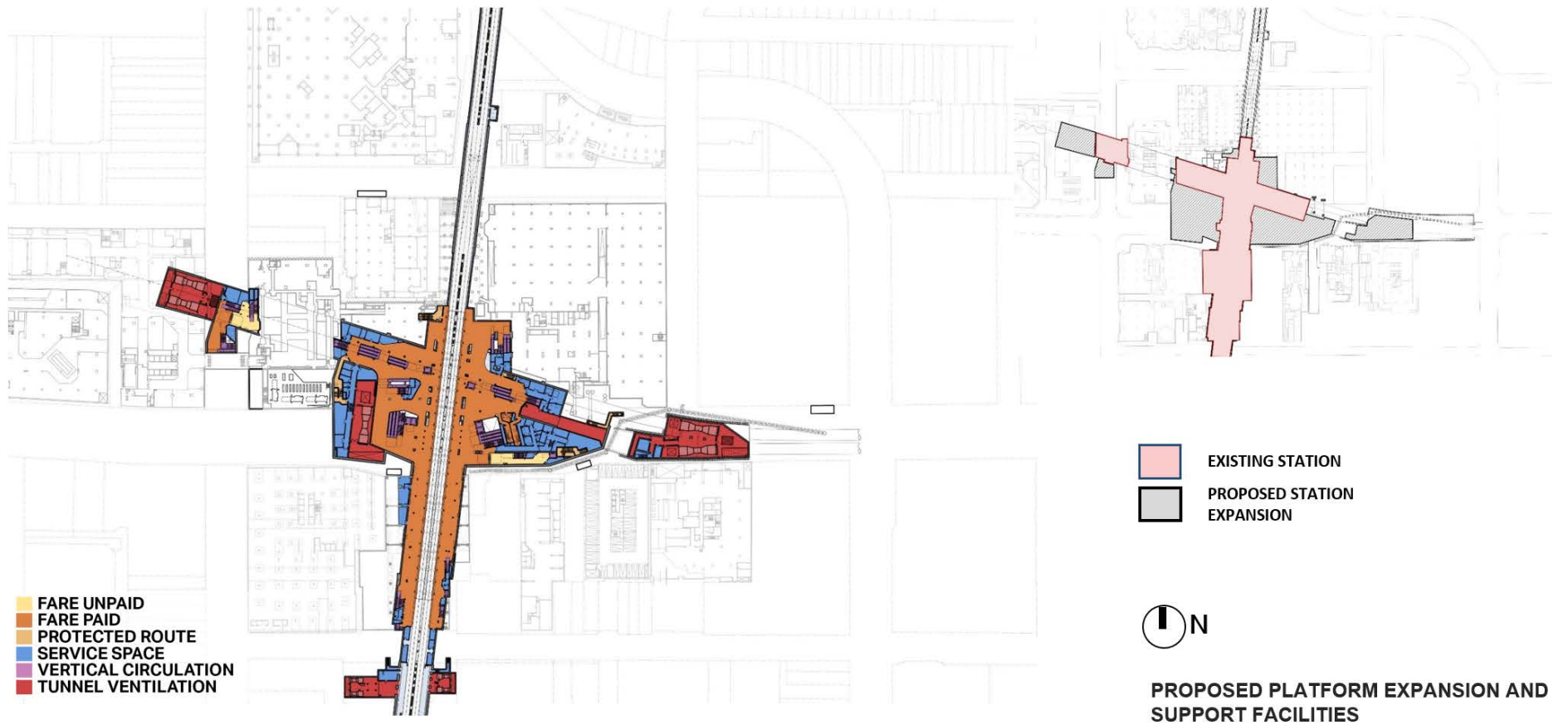
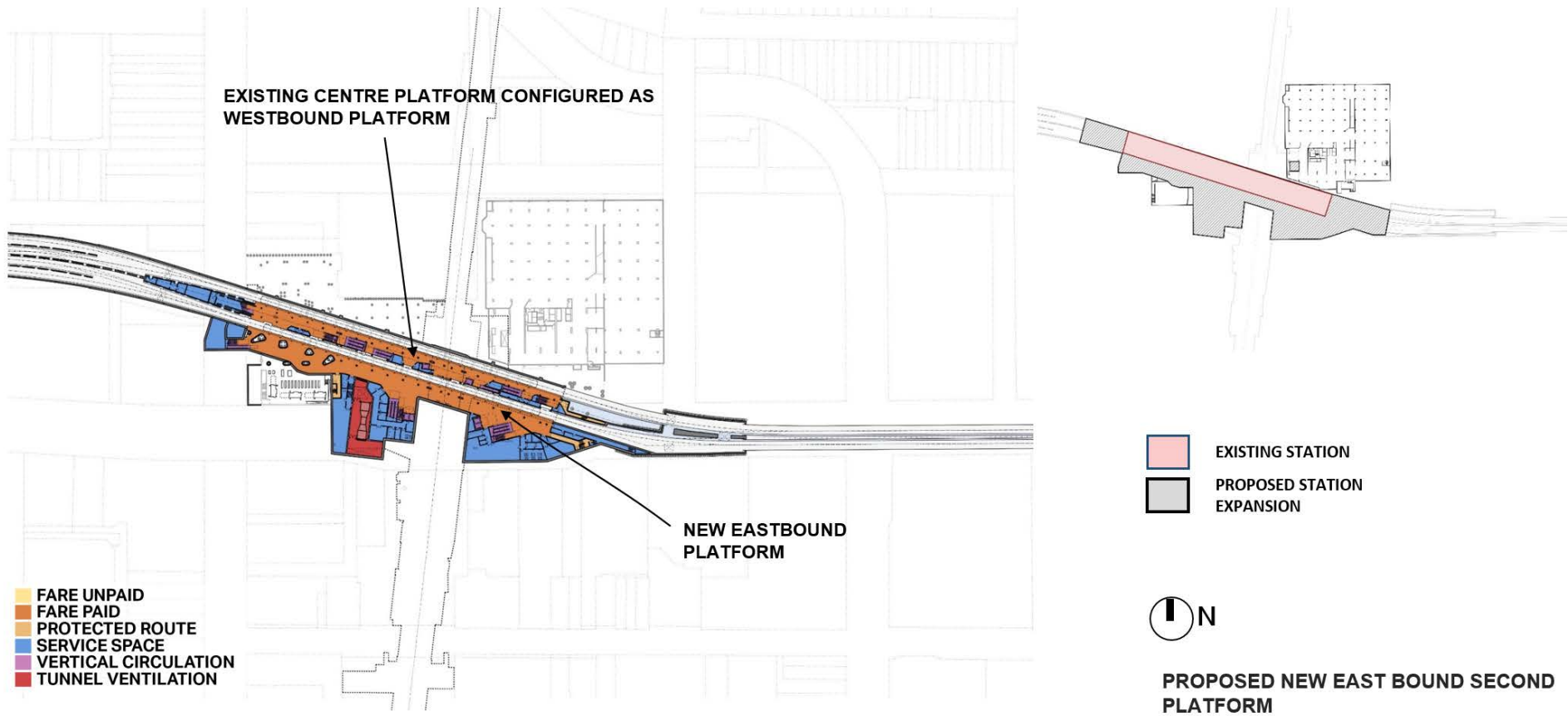


Figure 7.0 Proposed New Eastbound Second Platform



1.2 Line 1 Yonge Extension (L1YE or YNSE “Yonge North Subway Extension”)

Description

This project will extend the existing Line 1 Yonge subway north from Finch Station to the City of Richmond Hill. The extension will be approximately eight kilometres long. Potential stations in Toronto are at Cummer/Drewry and Steeles, and at up to an additional four locations in York Region. The project would be operated by the TTC as a seamless extension of the TTC’s existing Line 1 subway service.

Previous work was done by the TTC, the City of Toronto, York Region, and Metrolinx on preliminary planning and design of this subway extension. As part of its current work, on an Initial Business Case, the Province is evaluating the alignment, the number, and location of stations. The Province has indicated that the line would open after the Ontario Line and not before 2029.

Table 4.0 Line 1 Yonge Extension

Background Project Information	
Project Management and Delivery	Metrolinx and Infrastructure Ontario
Asset Owner	Province of Ontario
Operator	TTC
Maintenance	TTC ⁴
Capital Funding	Province of Ontario. Per Term 14 of the Preliminary Agreement, the City and the Province are calling on the federal government to fund 40% of project costs.
Key Agreements	Ontario-Toronto Transit Partnership Preliminary Agreement (November 2019) Ontario-York Region Transit Partnership (YNSE) Preliminary Agreement (May 2020)
Project Status	
Current Project Lifecycle Phase	Planning
Schedule	2029-2030 (in service following Ontario Line)

Key TTC interests Related to the Line 1 Yonge Extension

Key TTC interests related to the L1YE project are to ensure that:

- It is built to be compatible with the operations and maintenance of the existing line, including the TTC’s subway signalling system

⁴ Subject to executing agreement on maintenance roles and responsibilities

- It is capable of operating the service levels that are required by the projected demand
- Construction does not unduly impact the delivery of existing TTC subway and bus services. Construction-related delays to existing TTC services will be mitigated to minimize customer impact
- Construction is coordinated with nearby TTC subway construction projects
- It has TTC bus facilities that are suitable for excellent customer intermodal connections
- The TTC will lead procurement for new trains required for the L1YE to:
 - ensure system compatibility (e.g. track, Automatic Train Control, communications, crash energy management systems, etc.); and
 - maximize value-for-money through greater economies of scale
 While the TTC is leading the fleet procurement, in consultation with Metrolinx/Infrastructure Ontario, the cost of trains for L1YE, and the associated vehicle procurement costs are the financial responsibility of the Province/Metrolinx
- It has sufficient end of line train maintenance and storage facilities to support operation of the extension, and operation of more frequent service on the existing line
- It does not open before suitable capacity relief is provided to the Yonge corridor, such as by the Ontario Line
- Roles and responsibilities for maintenance of stations infrastructure and components will be determined through a business case analysis to support decisions around maintenance responsibilities

Next Line 1 Yonge Extension Planning Milestone

The next major planning milestone will be the evaluation of the Province’s recommended alignment and station locations.

Discussions continue between the City, York Region, and the Province on the number and locations of stations for the project in order to inform the analysis currently underway.

1.3 Line 2 East Extension (L2EE or SSE “Scarborough Subway Extension”)

Description

This project would extend the existing Line 2 Bloor-Danforth subway east from Kennedy Station to Sheppard Avenue and McCowan Road. The extension would be approximately eight kilometres long. Planned stations are at Lawrence & McCowan, Scarborough Centre, and Sheppard & McCowan. The project would be operated by the TTC as a seamless extension of the existing Line 2 subway service.

Table 5.0 Line 2 East Extension

Background Project Information	
Project Management and Delivery	Metrolinx and Infrastructure Ontario
Asset Owner	Province of Ontario
Operator	TTC
Maintenance	TTC ⁵
Capital Funding	Province of Ontario). In addition, the City and the Province are calling on the federal government to fund 40% of project costs, per Term 14 of the Preliminary Agreement. City Council endorsed re-allocation of \$0.660 billion in federal funding from Toronto's ICIP-PTIS federal allocation subject to terms outlined in 2019.EX9.1.
Key Agreements	Ontario-Toronto Transit Partnership Preliminary Agreement (November 2019)
Project Status	
Current Project Lifecycle Phase	Planning/ Tendering of Early Works
Schedule	2029-2030 in service

Key TTC Interests Related to the Line 2 East Extension

Key TTC interests related to the L2EE project are to ensure that:

- It is built to be compatible with the operations and maintenance of the existing line, including the TTC's subway signalling system
- It is capable of operating the service levels that are required by the projected demand
- Construction does not unduly impact the delivery of existing TTC subway and bus services. Construction-related delays to existing TTC services will be mitigated to minimize customer impact
- Construction is coordinated with nearby TTC subway construction projects
- It has TTC bus facilities that are suitable for excellent customer intermodal connections
- It has bus facilities at Scarborough Centre Station that will support the increased TTC and regional bus service planned to operate on Metrolinx's proposed Durham-Scarborough Bus Rapid Transit infrastructure.
- It does not preclude the later construction of a Line 5 Eglinton extension east from Kennedy Station
- It will include the necessary track facilities at Kennedy Station to support improved service resiliency and a possible future scheduled short turn service

⁵ Subject to executing agreement on maintenance roles and responsibilities

- The TTC will lead procurement for new trains required for the L2EE to:
 - ensure system compatibility (e.g. track, Automatic Train Control, communications, crash energy management systems, etc.); and
 - maximize value-for-money through greater economies of scale
 While the TTC is leading the fleet procurement, in consultation with Metrolinx and others, the cost of trains for the L2EE, and the associated vehicle procurement costs will be paid for by the province/Metrolinx
- It has sufficient train storage tracks to serve the additional fleet required for the extension
- Roles and responsibilities for maintenance of stations infrastructure and components will be determined through a business case analysis to support decisions around maintenance responsibilities

Construction Impact - RapidTO

During early planning for the construction of L2EE it emerged that Eglinton Avenue, between approximately Kennedy Station and Brimley Road will have to be slightly diverted and reduced from three to two lanes in each direction due to early works at Kennedy Station and the future tunnel construction. This conflicts with the City and TTC approved RapidTO project for dedicated bus lanes on Eglinton Avenue, Kingston Road, and Morningside Avenue. As a result, the dedicated bus lanes will not be installed on Kingston Road between Brimley Road and Kennedy Station until the subway construction is completed. The lack of dedicated lanes, and the increased traffic from the reduction in lanes at a crucial point in the bus network will result in delays to TTC customers and increased TTC operating costs. These customer effects continue to be evaluated by TTC and City staff.

Next Line 2 East Extension Planning Milestone

The next major planning milestone will be the review of the Province's detailed station designs.

Line 2 East Extension Provincial Procurement Timelines

The Province has recently closed a request for proposals for an Advanced Tunnel Contract that will deliver the tunnels, as well as support infrastructure such as the tunnel boring machine launch and extraction shafts, and headwalls in the tunnels that will permit the later construction of stations and emergency exit buildings. This is scheduled to be awarded in spring 2021, and is being done as a separate early contract, in advance of the construction of the stations and the rest of the line, in order to speed up construction. A second, separate early works contract (or contracts) would undertake modifications near Kennedy Station, including expansion to the electrical power substations and ventilation structures, and construction of new platform rooms to support the extension at the east end of the platform. Construction on these early works would begin in late 2021.

A future contract would deal with stations, rail, and systems, and would fit out the tunnels and stations, and commission the extension.

1.4 Ontario Line Project

Description

The project known as Ontario Line (OL) would build a new 16-kilometre automated rapid transit line between the Science Centre Station on Line 5 at Eglinton & Don Mills and Exhibition/Ontario Place. There would be up to 15 stations. As Operator of this new rapid transit line, the TTC has set out high level proposed operational roles and responsibilities in Appendix 1.0. The line would be fully grade-separated and is proposed to be partly underground, at grade, and above ground. Details of the trains to be used on the line are not fully known, but they are expected to be slightly smaller than existing TTC subway trains. The line is expected to be specified to meet projected passenger demand until at least the 2060s.

Table 6.0 Ontario Line Project

Background Project Information	
Project Management and Delivery	Metrolinx and Infrastructure Ontario
Asset Owner	Province of Ontario
Operator	TTC ⁶
Maintenance	Metrolinx/TTC*
Capital Funding	Province of Ontario. The City and the Province are calling on the federal government to provide 40% of project costs, per Term 14 of the Preliminary Agreement. City Council endorsed re-allocation of \$3.151 billion in federal funding from Toronto's ICIP-PTIS allocation subject to terms outlined in 2019.EX9.1
Key Agreements	Ontario-Toronto Transit Partnership Preliminary Agreement (November 2019)
Project Status	
Current Project Lifecycle Phase	Planning, Procurement
Schedule	2030

*Fare gate maintenance TBD

The project is currently in the planning stages. The alignment and station locations have been largely finalised, and the Province has begun stakeholder and public consultations on the line.

⁶ Refer also to Appendix 1.0 for TTC proposed roles and responsibilities; subject to agreement

Key TTC Interests related to the Ontario Line

Key TTC interests related to the Ontario Line project are to ensure that:

- It is capable of operating the required service levels and will have long-term capacity to meet ridership forecasts well into the future
- It will provide sufficient capacity to relieve crowding on Line 1 and will open before any Line 1 Yonge extension opens
- It will provide a customer experience that is consistent with other TTC rapid transit services
- Effective operational integration including physical, technical, and procedural integration with the TTC Transit Control Centre to support a seamless customer journey across the network
- The TTC's role as operator includes an integrated transit control centre, stations management and responsibility for the customer experience and customer journey. For details refer to the TTC's proposal in Appendix 1.0.
- Construction does not unduly impact the delivery of existing TTC subway and bus services; this could include construction of new streetcar tracks for diversion of streetcar routes during Ontario Line construction; Construction-related delays to existing TTC services will be mitigated to minimize customer impact
- Construction is coordinated with nearby TTC subway and streetcar construction projects
- It has excellent customer connections at the interchanges between the new line and Line 1 and Line 2
- It has TTC streetcar and bus stops and facilities that are suitable for excellent customer intermodal connections
- Operations and supervision of the line can be seamlessly interfaced with the rest of the TTC subway system
- Any special fare payment arrangements at the two stations with OL-GO train connections be consistent with applicable TTC fare policy and fare collection plans
- It does not preclude the continued operation of the TTC's existing Exhibition Loop, and does not preclude the proposed extension of streetcar tracks between Exhibition Loop and Dufferin Street
- Construction of the interchange stations does not negatively impact existing TTC infrastructure or its operations. Fully detailed engineering review of a number of structural, geotechnical and fire-life safety submittals will be required at a minimum of 3 stages of the design: 30%, 60%, and 90%
- Branding, identification, wayfinding, legibility of line elements, and fare collection and fare payment must be consistent with the rest of the TTC network for a seamless customer journey. Additional details are set out in detail in the TTC's proposal in Appendix 1.0

Next Ontario Line Planning Milestones

The next major planning milestone will be the detailed evaluation of the Province's recommended alignment and station locations.

Ontario Line Concept of Operations

On December 17, 2020 Infrastructure Ontario and Metrolinx issued Requests for Proposals for two major packages of work – one for the Southern Civil, Stations & Tunnels package and one for the Rolling Stock, Systems, Operations and Maintenance package. TTC subject matter experts are engaging with Metrolinx counterparts at a working group level to achieve a joint TTC - Metrolinx concept of operations that will be incorporated as an addendum to the RFP for the Ontario Line Project Specific Output Specification. The addendum will clarify the roles and responsibilities of the TTC as the operator. This collaborative work is ongoing.

Location of Ontario Line Maintenance and Storage Facility

The location of the maintenance and storage facility for the line was originally proposed by the Province for an industrial area in Leaside. The Province and City have been involved in discussions about alternative sites because of City concerns about the effects on employment lands and the road network at the original site. Since the TTC will not be operating the facility, the TTC's interest is in ensuring that any location selected be able to deliver sufficient trains to the line without delay or issue.

Upcoming Ontario Line Procurement Milestones

The Province has indicated that contracts to build the line will be split into three separate P3 packages, one each for the construction of the south, and north portions of the line, and a third for the railway and operating systems, including the carhouse and maintenance of the line. The Province is also planning early works contracts for parts of the line that are closely inter-related to the existing GO line. The early works construction could begin in 2021. The Request for Qualifications for the South and Railway Systems P3 contracts were issued in June 2020. A Request for Proposal for these two contracts were issued in December 2020, and will close in late 2021. Contracts would be awarded in 2022. The North P3 contract would proceed through the RFQ, RFP and contract award stages in 2022 to 2024.

1.5 Line 5 Eglinton (Eglinton Crosstown LRT Project)

Description

Line 5 Eglinton is a 19-kilometre light rail transit line that will run along Eglinton Avenue between Mount Dennis (Weston Road) and Kennedy Station. The line is being delivered as a provincial project known as Eglinton Crosstown LRT (ECLRT). The 19-kilometre corridor consists of 25 stops and stations, of which 15 are underground. The line will connect to more than 50 bus routes, three existing subway stations (Kennedy, Eglinton and Eglinton West), the UP Express, and three existing or future GO stations (Mount Dennis, Caledonia, and Kennedy), providing an important east-west link.

Figure 8.0 Line 5 Eglinton⁷



Background

In 2012, Metrolinx, the City of Toronto and the TTC signed a Master Agreement for the Implementation of the Toronto Light Rail Transit Program. This Master Agreement outlined Metrolinx's plans for the design, build, financing and maintenance of the LRT Program in Toronto, and to engage the services of the TTC as the Operator. The TTC as operator under Schedule G of the Master Agreement, has the following responsibilities during revenue service:

- Integrated transit control to manage train movement, emergency management and customer information
- Train operations
- Station operations
- Fare inspection and Transit Enforcement
- Customer service interface

In 2013, the TTC submitted to Metrolinx an Operating Requirements document for the ECLRT, outlining the TTC's expectations and requirements for TTC to safely and effectively fulfill its obligations in the Master Agreement for the Eglinton Crosstown LRT. This intent of the document was to inform the development of the Project Specific Output Specification (PSOS), which Metrolinx had drafted.

In 2014, Metrolinx sent out a request for proposal based on the PSOS, which included some elements of the TTC's Operating Requirements. Crosslinx Transit Solutions (CTS) was the successful consortium awarded the contract to design, build, finance and maintain (DBFM) the ECLRT for 30 years. The PSOS became the basis of the Project Agreement (PA) signed in 2015 between the consortium, referred as Project Co., and Metrolinx.

In 2016, the Province of Ontario and the City of Toronto signed the Agreement in Principle (AIP), which identified the Province as financially responsible for capital and

⁷ <http://www.metrolinx.com/en/greaterregion/projects/crosstown.aspx>

lifecycle maintenance costs. The City of Toronto assumed financial responsibility for operating and day- to-day maintenance costs. The AIP also stipulated that the City/TTC, would receive 100% of the farebox and non-farebox revenue to assist in offsetting operating and maintenance costs.

Table 7.0 Line 5 Eglinton

Background Project Information	
Project Management and Delivery	Metrolinx and Infrastructure Ontario
Asset Owner	Province of Ontario
Operator	TTC
Maintenance	Crosslinx Transit Solutions (CTS)*
Capital Funding	100% Provincial Funding
Operating and Maintenance Funding	City of Toronto – Operations and Daily Maintenance Province of Ontario – Lifecycle Maintenance
Key Agreements	Toronto LRT Program Master Agreement Toronto-Ontario Agreement in Principle
Project Status	
Current Project Lifecycle Phase	Construction
Schedule	2022

*Fare gate maintenance TBD

Line 5 Eglinton Project Update

The TTC has initiated mobilization efforts to integrate Line 5 Eglinton into all facets of TTC’s existing operations, and to negotiate the Train Operator Services Agreement with Metrolinx. To effectively prepare for the integration of the new LRT mode, the TTC created the LRT Operations Department in September 2018 to mobilize the TTC during the project phase and operate both the Line 5 Eglinton and Line 6 Finch West lines.

An Operating Agreement is to be developed two (2) years prior to commencement of revenue service. Metrolinx has transmitted to the TTC and City of Toronto their draft version of the revised ECLRT Operating Agreement, which was divided into three (3) individual agreements:

- Train Operator Service Agreement: outlines all day-to-day obligations between Metrolinx and TTC as a service provider.
- Municipal Operating and Maintenance Funding Agreement: outlines funding and revenue requirements.
- PRESTO Agreement: outlines all the business requirements related to the operations and maintenance of fare gates.

The TTC is working closely with Metrolinx and City of Toronto to develop these agreements. The TTC has engaged external legal counsel and relevant internal stakeholders to support the development of the agreements.

Operational Readiness – Line 5 Eglinton

To ensure full operational readiness on Day 1, the TTC has developed an operationalization timeline (refer to Figure 9.0) assuming an opening date of April 2022 for planning purposes only. Metrolinx has not yet announced the Line 5 Eglinton date and so the TTC's readiness activities are being planned to ensure the TTC has implementation flexibility for when Metrolinx announces the official opening date. The following activities are critical to operational readiness:

1. Development of the Train Operator Service Agreement (TOSA)

The TTC and Metrolinx aim to have a draft of the TOSA for official review completed in Q1 2021. This Agreement underpins the fundamental roles and responsibilities for the TTC and Metrolinx for the life of the Agreement, and has driven the TTC to create several plans to accommodate the contractual requirements of this Agreement.

In order for the TTC to fulfill its contractual obligations, and also to uphold the service standard TTC customers expect, the TTC is working to develop plans with a particular focus on the introduction phase of LRT to the TTC network. These include a bus contingency plan which will allocate parallel bus service to offset any disruptions experienced in the first six months of service and will also include provisions for shuttle buses similar to those used for subway service disruptions. Another is the stations evacuation plan, which will dictate the steps that stations and operations staff will take in the event that an evacuation is required; mimicking current subway practices.

2. Recruitment of TTC Workforce

The TTC is planning for 235 operations positions including LRT operators, stations and customer service staff, transit control and power control staff, special constables and revenue protection staff.

The recruitment process will span between March 2021 to December 2021 to allow sufficient time to onboard various frontline staff prior to the Revenue Service Demonstration period expected to start in March 2022. The recruitment of LRT Operators is expected to begin in July 2021, while the recruitment for other relevant positions such as Instructors, Transit Control Operators and Power Control staff will occur between March and August 2021. Recruitment for stations, special constables and revenue protection staff will start in the beginning of October 2021 with the objective of recruiting all of the approximately 235 LRT operations positions by the end of 2021.

3. Training of TTC Workforce

CTS is required by the Project Agreement to develop an ECLRT Rule Book and accompanying Standard Operating Procedures (SOPs), based on the TTC's existing Subway Rule Book and SOPs. The TTC is closely involved in the development. It is expected that this material will be completed by February 2021 and will form the foundation of the training for TTC employees.

CTS is also required to provide a training curriculum for the new systems, facilities and infrastructure which they are responsible to design, build and maintain. CTS is also responsible for training TTC Training Department staff, who will in turn train TTC employees. Two parallel activities will take place:

1. The TTC Training Department will adapt the training curriculum CTS creates to the TTC's standard training practices. This requires modifying the materials to fit the TTC's criteria for training, for example allowing the inclusion of important topics as diversity, inclusion and customer service, and ensures consistency in training approaches across all modes of TTC service. This work is expected to be completed by September 2021.
2. Train-the-Trainer is expected to be completed by October 2021. These training sessions will include an in-situ component, in both vehicles and stations.

Following Train-the-Trainer and curriculum development, LRT Operator training will commence. It is expected that this training will last approximately 20 days, and is currently estimated to begin in November 2021 and be complete in March 2022.

Power Control and Transit Control training will also follow a Train-the-Trainer model, but will use Power Control and Transit Control trainers embedded in their respective departments. This training is expected to be conducted between September and December 2021.

4. Modification to Transit Control Centre

Critical to support an integrated transit network to provide a seamless, customer journey is a fully physically and procedurally integrated transit control centre. With the addition of the LRT, the TTC's Transit Control Centre is being modified to include the systems required to control and monitor train movement, fire alarms, traction power, and other important activities that Transit Control currently performs for TTC network. These modifications will include placement of servers, installing new desks and computers, and installing new mimic screens, all while ensuring the power consumption and heating, cooling and ventilation requirements are met. It is expected that this work will be completed by February 2022.

5. Installation of Fare Gates

The TTC, in its role as the Operator of Line 5 Eglinton, is responsible for revenue collection, security and the safety of TTC customers. As stewards of public funds, the

TTC has engaged Metrolinx to ensure that fare gates are installed at each of the 15 Line 5 Eglinton underground stations.

The TTC's current revenue collection practices include the use of fare gates at rapid transit stations to demarcate the paid and unpaid zones and to collect fares using the PRESTO farecard system. The PSOS included the requirement for fare gates only at interchange stations – Cedarvale (which will be the new name of TTC's Eglinton West Station), Eglinton, and Kennedy. For the remainder of the stations, the PSOS required off-board tap pillars similar to used on the GO network. The TTC, Metrolinx, and the City of Toronto have since agreed to install faregates at all underground station. This will ensure a seamless customer experience across the TTC rapid transit network and will support revenue collection and protection. This investment in infrastructure is an important TTC contribution to the Project. The procurement, installation and commissioning of 112 fare gates is expected to be completed by end of December 2021.

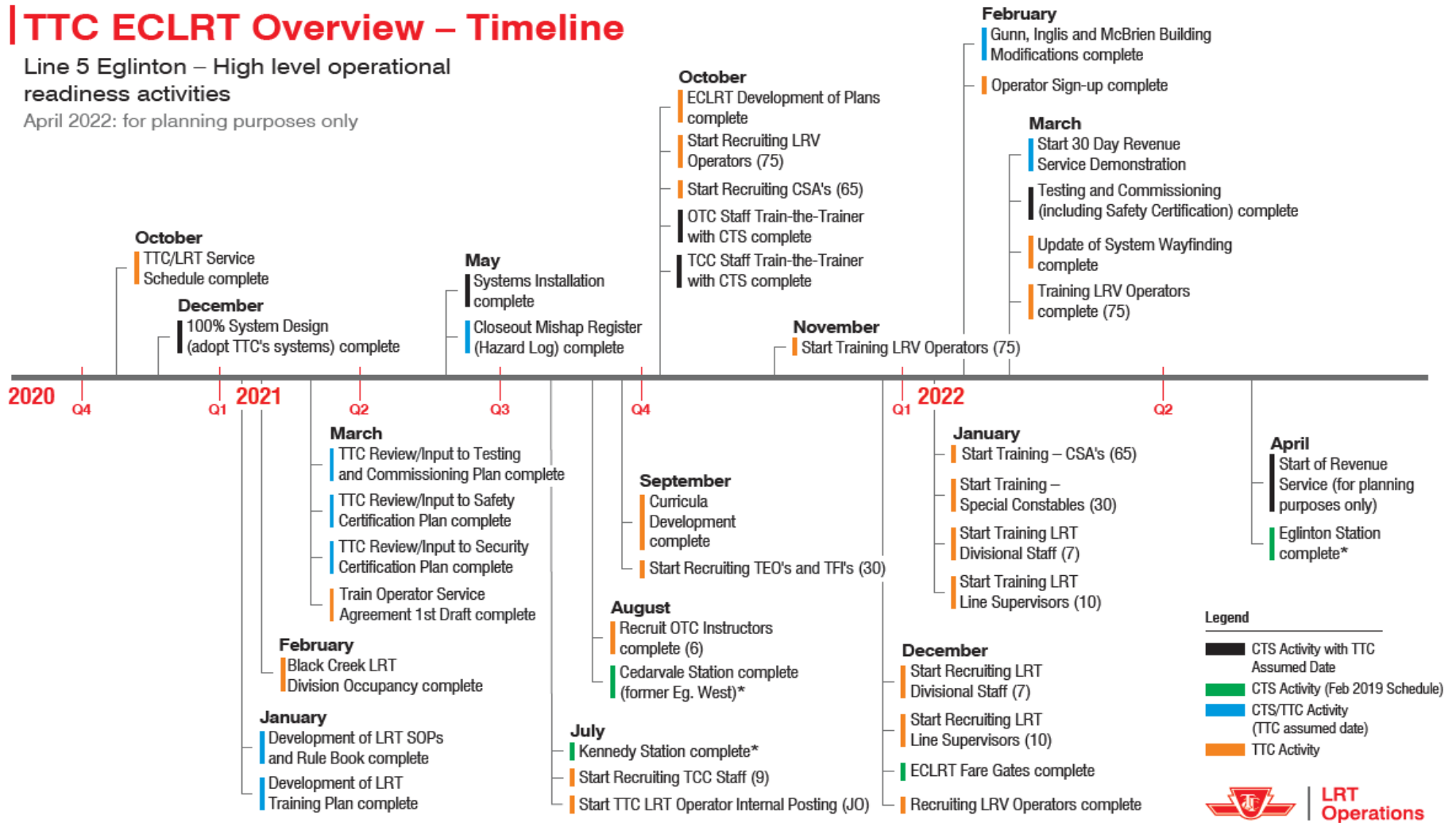
A timeline summarizing the workplan to operationally ready Line 5 Eglinton is detailed on the next page in Figure 9.0.

Figure 9.0 TTC Line 5 Eglinton Operational Readiness Timeline

TTC ECLRT Overview – Timeline

Line 5 Eglinton – High level operational readiness activities

April 2022: for planning purposes only



*Station opening timelines are based on the February 2019 project schedule and this timeline assumes construction, testing and commissioning are complete. Actual station opening dates will be confirmed by Metrolinx.

1.6 Line 5 Eglinton West Extension

Description

This project would extend the under construction Line 5 Eglinton line west from Mount Dennis Station at Weston Road to Renforth Avenue and Eglinton Avenue, with a potential future extension to Pearson Airport. The extension would be approximately nine kilometres long in Toronto. Seven stations are planned in Toronto at Jane Street, Scarlett Road, Royal York Road, Islington Avenue, Kipling Avenue, Martin Grove Road, and Renforth Drive. Additional stations would be built on any airport extension. The line would be underground to just east of Jane Street, then elevated to west of Scarlett Road, and then underground the rest of the way in Toronto. The project would be operated by the TTC as a seamless extension of the under-construction Line 5 Eglinton service.

Table 8.0 Line 5 Eglinton West Extension

Background Project Information	
Project Management and Delivery	Metrolinx and Infrastructure Ontario
Asset Owner	Province of Ontario
Operator	TTC
Maintenance	Metrolinx-procured maintainer
Capital Funding	Province of Ontario; Province is calling on the federal government to provide 40% of project costs
Key Agreements	Ontario-Toronto Transit Partnership Preliminary Agreement (November 2019)
Project Status	
Current Project Lifecycle Phase	Initial Planning/ Tendering of Early Works
Schedule	2030/2031

*Fare gate maintenance TBD

The basic design of the tunnels has been completed by the Province. The next major milestones will be the evaluation of the Province's detailed station designs, and the development of a concept of operations for the line.

Key TTC Interests Related to the Line 5 Eglinton West Extension

Key TTC interests related to the Line 5 Eglinton West Extension are to ensure that:

- It is built to be compatible with the operations and customer experience of the under-construction Line 5 Eglinton
- It is capable of operating the service levels that are required by projected demand

- Construction does not unduly impact the delivery of existing TTC bus services; Construction-related delays to existing TTC services will be mitigated to minimize customer impact
- Construction is coordinated with nearby TTC bus construction projects
- It has station entrances and TTC bus stops that are suitable for excellent customer intermodal connections
- The line will include the necessary track facilities at Jane Street to support improved service resiliency and a possible future scheduled short turn service

Next Steps

The Province has released a request for proposals for an Advanced Tunnel Contract that would deliver the tunnels, as well as support infrastructure such as tunnel boring machine launch and extraction shafts, and headwalls in the tunnels that will permit the later construction of stations. This is scheduled to be awarded in mid-2021, and is being done as a separate early contract, in advance of the construction of the rest of the line, in order to speed up construction. A future contract would deal with stations, rail, and systems, and would fit out the tunnels and stations, and commission the extension. The Province has indicated that the project is expected to be complete by 2030-2031.

1.7 Line 5 Eglinton East Extension

Description

This City of Toronto priority project would build an easterly extension of Line 5 Eglinton, from Kennedy Station along Eglinton Avenue East, Kingston Road, Morningside Avenue, through the University of Toronto Scarborough campus, and then along Sheppard Avenue and Neilson Road to Malvern Town Centre. City of Toronto council approved this extension in April 2019. City of Toronto staff have updated the design and cost estimate for the project, and this was presented to City Council in December 2020 (“Update on the City’s Transit Expansion Projects – Fourth Quarter 2020”). A broader plan, including a business case, the Transit Project Assessment Process, a funding and financing strategy and a plan for more detailed design work will be included in a subsequent report to Council as part of the 2022 budget process.

Table 9.0 Line 5 Eglinton East Extension

Background Project Information	
Project Management and Delivery	Planning – City of Toronto Design, Engineering, Construction - TBD
Operating and Day to Day Maintenance Funding	City of Toronto (Per Toronto-Ontario Agreement in Principle)
Key Agreements	Toronto-Ontario Agreement in Principle
Project Status	
Current Project Lifecycle Phase	Initial planning

Background Project Information	
Capital Cost Estimate	\$4.0 to \$4.4 billion (City of Toronto estimate)

The Line 5 East Extension is identified as a City priority. The line is assumed to be an extension of the under-construction Line 5, and would presumably be designed to have trains operate through Kennedy Station between the original central section and the proposed eastern extension. Discussions with Metrolinx are required to confirm project details and an approach to governance and managing the further stages of the project.

The section between Kennedy Station and Midland Avenue would be underground, with most of the rest of the line at street level, in the median of the road. A short underground section would be built at the Kingston Road/Lawrence Avenue/Morningside Avenue intersections. Stop locations were determined through earlier work. The line would replace the bus services currently operated by the TTC on the Eglinton RapidTO bus rapid transit corridor, and stops on Line 5 would be in similar locations to the RapidTO bus stops. The line would require a maintenance and storage facility for the additional trains that would operate the line. The Province's future plans for rapid transit on Sheppard Avenue East have a bearing on the City's plans for the Line 5 Extension.

Key TTC Interests relating to the Line 5 East Extension

Key TTC interests related to the Line 5 East Extension project are to ensure that:

- It is built to be compatible with the operations and customer experience of the under-construction Line 5 Eglinton
- It is capable of operating the service levels that are required by projected demand
- Construction does not unduly impact the delivery of existing TTC bus services; Construction-related delays to existing TTC services will be mitigated to minimize customer impact
- Construction is coordinated with nearby TTC bus and subway construction projects
- It has stop locations and station entrances that are suitable for excellent customer intermodal connections
- The line will include the necessary track facilities at key locations to support service resiliency and possible future scheduled short turn services
- A full understanding is developed around the TTC role in operating the extension, given that the ownership and maintenance arrangements, and the roles of the City of Toronto and the Province, are not yet known

Next Steps

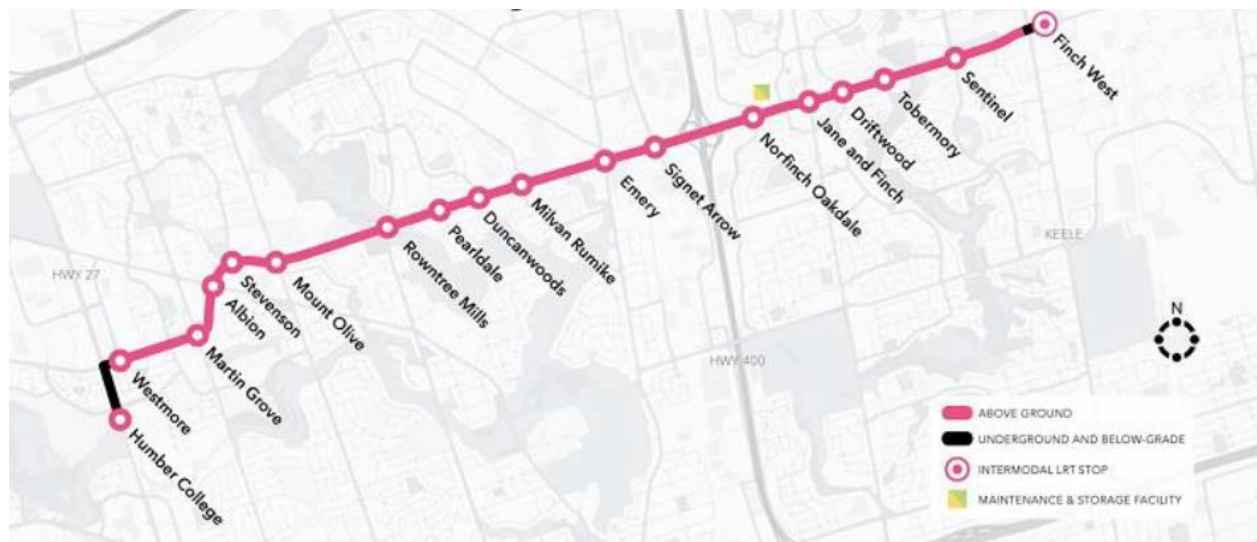
The next major planning milestone will be the development by the City of a detailed business case for the extension, the Transit Project Assessment Process, and discussions between the City and the Province over the possible extension and its project governance.

1.8 Line 6 Finch West (Finch West LRT)

Description

Line 6 Finch West is an 11-kilometre light rail transit line along Finch Avenue West between Finch West Station at Keele Street and Humber College at Highway 27. The line is being delivered by a provincial project known as Finch West LRT (FWLRT). Line 6 Finch West will provide transit service to Northwest Toronto with connections to TTC, GO, MiWay, YRT, and Brampton Transit/Züm transit services, as well as providing an important link to Humber College.

Figure 10.0 Line 6 Finch West⁸



Background

In November 2016, City Council considered the report 2016.EX19.1 Transit Network Plan Update and Financing Strategy, and approved principles associated with cost-sharing and future roles and responsibilities on the Finch West LRT. An Agreement in Principle ("AIP") was entered into that specified the following:

- The TTC will be the operator;
- The City/ TTC will establish service levels and set fares within a framework;
- The City/TTC will be responsible for operating and regular maintenance costs of the LRTs, as well as retain farebox revenue and non-fare box revenue; and
- The Province will retain asset ownership and control of LRTs and be responsible for lifecycle maintenance costs.

In May 2018, Metrolinx and Infrastructure Ontario selected Mosaic Transit Group (MTG), a consortium of ACS Infrastructure Canada, Aecon, and others, to complete the Finch West LRT project. MTG has been awarded a contract by Metrolinx to design, construct and finance an integrated transit system consisting of 17 stops and one station, track work, signaling, communications and other required infrastructure. MTG

⁸ <http://www.metrolinx.com/en/greaterregion/projects/finchwest-lrt.aspx>

will also maintain the LRT system for 30 years, including lifecycle repair and renewal of building and system components.

Table 10.0 Line 6 Finch West

Background Project Information	
Project Management and Delivery	Metrolinx and Infrastructure Ontario
Asset Owner	Province of Ontario
Operator	TTC
Maintenance	Mosaic Transit Group (MTG)*
Capital Funding	Provincial, and Federal (up to \$333M)
Operating and Maintenance Funding	City of Toronto – Operations and Daily Maintenance Province of Ontario – Lifecycle Maintenance
Key Agreements	Toronto LRT Program Master Agreement Toronto-Ontario Agreement in Principle
Project Status	
Current Project Lifecycle Phase	Construction
Schedule	2023

*Fare gate maintenance TBD

Project Update

Since Line 6 Finch West (the FWLRT project) is scheduled to open after Line 5 Eglinton (the ECLRT project), this project is earlier in its delivery timeline. The TTC has been extensively involved in activities such as design review and concept of operations.

Discussions for the Operating Agreement for the FWLRT are expected to commence in early 2021. The TTC expects that there will be many similarities between the ECLRT Operating Agreement and the FWLRT Operating Agreement despite a different maintainer. These similarities will be beneficial to ensure a consistent service delivery for TTC customers.

1.9 Waterfront Transit

Description

Several streetcar infrastructure projects are in the planning stages that would allow expansion of streetcar service to new areas of the waterfront, and permit increased and improved streetcar service. These projects are being carried out jointly by the TTC, City of Toronto, and Waterfront Toronto.

Table 11.0 Waterfront Transit

Background Project Information	
Project Management and Delivery	TTC / City of Toronto / Waterfront Toronto
Asset Owner	TTC
Operator	TTC
Maintenance	TTC
Capital Funding	Funding for current phase of PDE from City of Toronto and Waterfront Toronto Construction funding TBD
Operating and Maintenance Funding	City of Toronto
Project Status	
Current Project Lifecycle Phase	Preliminary Design and Engineering
Capital Cost Estimate	TBD
Schedule	TBD – late 2020s

The Waterfront Transit/East Bayfront project would introduce a new streetcar service operating eastwards from Union Station, along Queens Quay to Cherry Street. Expansion of the existing underground streetcar loop at Union Station is required, along with possible expansion of the underground Queens Quay/Ferry Docks station; the construction of a new streetcar portal east of Bay Street to bring streetcars to street level; and the construction of a new dedicated streetcar right of way along Queens Quay East. This is a priority transit project of the City of Toronto. The project is being coordinated with Metrolinx’s plans for modifications to Union (railway) Station.

The Notice of Completion under the TPAP and completion of the 30% preliminary design and engineering phase of the Union Station-Queens Quay and East Bayfront link to Cherry Street is anticipated for late 2021. This work will be followed by a report to the TTC Board and to Council on the preferred design and a recommended implementation schedule. That report will also make recommendations and identify associated costs for potential phased implementation of transit improvements.

The Exhibition Loop-Dufferin Gate Loop project would build a new streetcar connection between Exhibition Loop, on the north side of Exhibition Place, and Dufferin Gate Loop, on Dufferin Street north of the Dufferin Gate of Exhibition Place. This connection would allow new through streetcar service to be operated between Union Station, Dufferin Street, King Street, The Queensway, and farther west; and would provide future connections to any higher-capacity streetcar line that is built along the Gardiner Expressway/Lake Shore Boulevard West corridor. The project is being coordinated with Metrolinx’s plans for an Exhibition Station on the Ontario Line and is currently on hold

until further details of the Ontario Line station, and other initiatives in the Exhibition Place and Ontario Place areas, are available.

1.10 RapidTO

Description

The RapidTO program began in 2020 and has seen improvements successfully introduced on the Eglinton Avenue East/Kingston Road/Morningside Avenue corridor, one of the TTC's busiest. Consultation and further evaluation is under way on expanding these improvements to other busy bus corridors in Toronto. Buses 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 increased capacity 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. Project details are in Appendix 2.0.

Table 12.0 RapidTO

Background Project Information	
Project Management and Delivery	TTC / City of Toronto
Asset Owner	City of Toronto
Operator	TTC
Maintenance	City of Toronto
Capital Funding	City of Toronto
Operating and Maintenance Funding	City of Toronto
Project Status	
Current Project Lifecycle Phase	One corridor implemented / others in planning
Capital Cost Estimate	Approximately \$7.8-million for the first corridor; costs of additional corridors TBD
Schedule	2020 to future years

The next major planning milestone will be continued planning and consultation on the next corridors.

1.11 Durham Scarborough BRT

Description

The Durham-Scarborough Bus Rapid Transit (DS-BRT) project would provide approximately 36 kilometres of dedicated bus infrastructure, stretching eastwards from Scarborough Centre Station on the existing Line 3 / future Line 2 along Ellesmere Road

through the University of Toronto Scarborough Campus, and along Kingston Road and Highway 2, to downtown Oshawa. The project is intended to improve interregional transit connectivity. The project would build dedicated bus lanes and bus stop platforms, which in Toronto would primarily be along Ellesmere Road. It is the TTC's expectation that the lanes in Toronto would be available for use by existing and future TTC local and express bus routes, in addition to regional buses.

Table 13.0 Durham Scarborough BRT

Background Project Information	
Business Case Development	Metrolinx / Durham Region
Asset Owner	Unknown TBD
Maintenance	Unknown TBD
Operator	TTC / Durham Region Transit / GO Transit
Project Status	
Current Project Lifecycle Phase	Preliminary Design
Schedule	TBD

Project Update

The project is in the planning and preliminary design stages. The detailed design has not been finalised. The emerging design in Toronto is median lanes and stops along most of Ellesmere Avenue between McCowan Road and Kingston Road, with curbside running in general traffic lanes at the U of T Scarborough campus, to connect with the proposed Line 5 Eglinton East extension.

Key TTC Interests related to the DS-BRT

Key TTC interests related to the DS-BRT project are to ensure that:

- It is capable of operating the required service levels
- Stops will be provided at locations that serve TTC customers and the TTC route network
- It will provide a customer experience that is consistent with other TTC services
- A full understanding is developed around the TTC role in operating on the bus rapid transit facility, given that the ownership and maintenance arrangements, and the roles of the City of Toronto, Metrolinx, and Durham Region, are not yet known
- Construction does not unduly impact the delivery of existing bus services; Construction-related delays to existing TTC services will be mitigated to minimize customer impact
- Construction is coordinated with nearby subway and bus construction projects
- Any integrated fare payment arrangements are consistent with TTC fare policy and fare collection plans

Next Steps

The next major planning milestone will be the Transit Project Assessment Process to be completed by end of 2021 and detailed evaluation of the Province's recommended alignment and stop locations, and the development of a concept of operations for the bus rapid transit facility.

1.12 Dundas BRT

Description

The Dundas Bus Rapid Transit project would provide dedicated bus infrastructure along a 40-km section of Dundas Street between Kipling Station in Toronto through Mississauga and Halton Region to the village of Waterdown in Hamilton. The project is intended to improve interregional transit connectivity. In Toronto, between Kipling Station on Line 2 and The West Mall, it is the TTC's expectation that the lanes would be available for use by existing and future TTC local and express bus routes, in addition to regional buses.

Table 14.0 Dundas BRT

Background Project Information – Dundas Bus Rapid Transit	
Business Case Development	Metrolinx
Asset Owner	Unknown TBD
Operator	TTC / MiWay / GO Transit/ Other 905 operators
Maintenance	Unknown
Project Status	
Current Project Lifecycle Phase	Concept Definition
Schedule	Unknown

The project is in the early planning stages. The detailed design and stop locations have not been finalised. Design work on the Toronto section has not advanced as quickly as the design work in Mississauga, and has not been carried out to any significant degree.

Key TTC interests related to the Dundas BRT

Key TTC interests related to the Dundas BRT project are to ensure that:

- It is capable of operating the required service levels
- Stops will be provided at locations that serve TTC customers and the TTC route network
- It will provide a customer experience that is consistent with other TTC services
- A full understanding is developed around the TTC role in operating on the bus rapid transit facility, given that the ownership and maintenance arrangements,

and the roles of the City of Toronto, Metrolinx, and Mississauga, are not yet known

- Construction does not unduly impact the delivery of existing bus services; Construction-related delays to existing TTC services will be mitigated to minimize customer impact
- Construction is coordinated with nearby subway and bus construction projects
- Any integrated fare payment arrangements are consistent with TTC fare policy and fare collection plans
- Any change to the name of Dundas Street in Toronto is reflected in the name of this project

Next Steps

The next major planning milestone will be the detailed evaluation of the Province's recommended alignment and stop locations, and the development of a concept of operations for the project.