



Transit Network Expansion Update

Date: November 22, 2023
To: TTC Board
From: Chief Capital Officer

Summary

As a leading transit operator with more than 100 years of institutional knowledge, the TTC is contributing its considerable expertise to expand the TTC network while centring TTC customers in all of our services.

Working across operations, maintenance, engineering, communications, and strategy and customer experience disciplines, the TTC is working collaboratively with Metrolinx, the City of Toronto, York Region, Infrastructure Ontario, and other partners developing the expanded service for the transit system of our City: delivering an integrated, accessible, safe transit network expansions seamlessly interfacing with the existing TTC network, and connecting TTC customers with all of the mobility options within the City of Toronto, and to neighbouring municipalities.

This report includes updates on:

Provincial Priorities Subway program:

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

Provincial LRT program:

- Line 5 Eglinton; and
- Line 6 Finch West.

City Priority Expansion Projects:

- Eglinton East LRT;
- Waterfront East LRT;
- RapidTO – Bus Rapid Transit (BRT) and Surface transit priority measures;
- Durham-Scarborough BRT; and
- Multiregional Dundas BRT.

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

Recommendations

It is recommended that the TTC Board:

1. Delegate authority to the Chief Financial Officer, to authorize additional positions to flexibly respond to the resource requirements of the Metrolinx Subway Program, subject to the following conditions:
 - a. Confirmation is received from Metrolinx for the TTC's 2023 Annual Work Plan for the Provincial Priority Subway Projects, and Metrolinx agrees to fund all costs associated with the additional positions fully; and
 - b. Changes to authorized complement and gross expenses under this delegated authority are reported as part of quarterly variance reports.

Financial Summary

Provincial Priority Subways Program

Planning and Development Phase Cost Recovery

As reported on July 23, 2019, the Province enacted a regulation (O. Reg 248/19) that designates the Scarborough Subway Extension, Yonge North Subway Extension, and Relief Line South and North (now Ontario Line) as 'sole responsibility projects' of Metrolinx.

Effective August 30, 2019, consultant contracts for these transit expansion projects were reassigned to Metrolinx from the TTC based on the Province's legislated authority to transfer assets, rights, and obligations related to the projects. TTC costs of \$239 million incurred up to August 31, 2019, were funded by the City. Negotiations are ongoing for reimbursement from the Province to the City.

TTC's Project Assurance Responsibilities

The TTC continues to actively work with Metrolinx to identify necessary resources to support the Provincial Priority Subway Program based on the program schedule updates provided by Metrolinx. In 2022, Metrolinx approved 29 additional positions, providing a total of 65 positions dedicated to the TTC's project assurance function for the Metrolinx Subway Expansion Program. Additional resource requirements are included as part of the 2023 Annual Work Plan and subject to final agreement and approval by Metrolinx under the TTC-Metrolinx Resource Agreement for the Provincial

Priority Subway Program. The cost of approved Project Assurance resources is fully funded by Metrolinx.

Service Disruption Policy and the Recovery of Additional Operating Costs

As construction activities associated with the subway expansion program increases, construction delays and ensuing traffic congestion will require the TTC to add vehicles to maintain its service levels. This will result in the TTC incurring increased costs to operate bus replacement services due to streetcar track and/or subway closures and diversions to accommodate the subway expansion capital works. Work is ongoing between Metrolinx and TTC staff to finalize a policy to govern processes and eligible costs for reimbursement. At this time, the TTC anticipates that Metrolinx will fund service disruption costs.

Line 3 Bus Replacement Program

The SRT Bus Replacement Plan will increase operating costs due to the lower carrying capacity of buses compared to SRT trains, resulting in higher costs on a net basis. With the Line 3 derailment on July 24, 2023, and the subsequent decision to cease Line 3 train operations, a shuttle bus service was immediately implemented and will continue to run until the full budgeted and planned bus service replacement begins on November 19, 2023. Cost of the shuttle bus service for the period up to November 19, 2023, net of savings from the SRT no longer operating, is estimated at \$5 million.

With the planned bus replacement service operating on local roads with transit priority measures taking effect in November 2023, additional net operating costs of \$99.5 million for the 2023-to-2030 time period are anticipated. As shown in Table 1 below, should capital funding to construct the busway on the SRT right-of-way (ROW) be secured, and construction complete by the end of 2026, operating costs for the same time period are expected to be \$18.7 million lower due to lower operator and vehicle requirements once the busway is in operation.

Table 1: SRT Bus Replacement Plan Incremental Operating Costs (November 2023 to 2030)*

SRT Bus Replacement Incremental Operating Costs with on Street Operating throughout (\$ million)	2023	2024	2025	2026	2027	2028	2029	2030	Total between 2023-2030
Capital Costs									
Street Operation ONLY	2.9	31.1	31.8	32.6	33.5	34.4	35.3	36.3	238.1
SRT costs eliminated	-1.4	-19.6	-19.6	-19.6	-19.6	-19.6	-19.6	-19.6	-138.6
Net Additional operating funding required	1.5	11.5	12.2	13.0	13.9	14.8	15.7	16.7	99.5
SRT Bus Replacement Incremental operating Costs with Bus Right of Way, starting Jan 2027' (\$ million)									
Operating costs									
Operating impact of Bus Replacement; With Busway in 2027	2.9	31.1	31.8	32.6	29.1	29.9	30.6	31.3	219.4
SRT costs eliminated	-1.4	-19.6	-19.6	-19.6	-19.6	-19.6	-19.6	-19.6	-138.6
Net Additional operating funding required	1.5	11.5	12.2	13.0	9.5	10.3	11.0	11.7	80.8
Operating Cost Savings with Busway	0.0	0.0	0.0	0.0	4.4	4.6	4.8	5.0	18.7

* Table excludes \$5 million cost of bus shuttle service operated between July 24 and November 18, 2023, prior to the implementation of the full bus replacement plan on November 19, 2023.

As stated in the September 26, 2023, Board report entitled, [Line 3 Bus Replacement Update](#), the TTC is progressing to the final design of the Line 3 ROW busway conversion. If funded and constructed, the busway will provide customers with a faster and more reliable bus replacement service. The current estimated capital cost for construction of the ROW, based on 30% design, is \$55.7 million, but may be higher as it is subject to the finalization of the design.

The current estimate includes the construction costs to remove existing track infrastructure and systems for the trains; costs to assemble required property for the busway and bus stop platforms; and costs to install new pavement to allow buses to operate.

Based on current estimates, the total capital project cost for the SRT Bus Replacement Infrastructure project, including the bus right-of-way, is approximately \$96.2 million, as outlined in Table 1 below. Of this total capital funding requirement, \$40.5 million has been funded, with \$2.7 million incurred to the end of 2022 and \$37.7 million in funding included in the TTC's 2023-2032 Capital Budget and Plan under the SRT Life Extension/Transition capital program, which the TTC Board approved on January 9, 2023, and by City Council on February 15, 2023.

The approved funding enables the TTC to complete the capital infrastructure necessary to implement the bus replacement service, which includes the Kennedy and Midland SRT Replacement Transit Priority Measures work package; platform modifications at Scarborough Centre and Kennedy stations; and the temporary bus terminal at Kennedy Station. The approved budget also provides funding to complete the design of the Scarborough Rapid Transit busway conversion infrastructure. Of the total approved funding, approximately \$26 million has been committed to date for the SRT Bus Replacement Infrastructure project.

Table 2: Project Cash Flow for Line 3 Bus Replacement Infrastructure

Line 3/SRT Bus Replacement Infrastructure (\$ Millions)	LTD	2023	2024	2025	2026	2027	10-Year Plan	TOTAL
FUNDED								
Platform Modification at Scarborough Centre and Kennedy Stations	0.6	4.0	6.9	-	-	-	10.9	11.6
Transit Priority Measures	0.4	5.1	4.5	-	-	-	9.6	10.0
Temporary Bus Terminal at Kennedy Station	0.9	5.6	8.5	-	-	-	14.1	15.0
SRT ROW Conversion to Busway	0.9	1.5	1.5	-	-	-	3.0	3.9
TOTAL FUNDED	2.7	16.2	21.5	-	-	-	37.7	40.5
UNFUNDED								
SRT ROW Conversion to Busway	-	-	3.7	20.0	20.0	12.0	55.7	55.7
Total SRT Capital Requirement	2.7	16.2	25.2	20.0	20.0	12.0	93.4	96.2

In addition to the capital costs noted above, the cost to demolish surplus Line 3 infrastructure, including the elevated guideway, following the conversion of a portion of the Line 3 ROW for buses, is estimated to be in the range of \$150 million to \$175 million.

The discussions are underway between the City and the Province on a ‘New Deal’ to address the financial deficit faced by the City. The work on the Toronto-Ontario Subway Agreement in Principle (AIP) is currently on hold until the finalization of the new deal discussions with the Province. It is expected that the AIP will address the recovery of costs associated with the Scarborough Rapid Transit (SRT), and the reconciliation of sunk costs associated with uploading expansion projects.

City Priority Expansion Projects – Eglinton East LRT and Waterfront East LRT

Eglinton East LRT (EELRT)

There is no funding dedicated to the EELRT in the TTC’s Capital Budget and Plan, and the Project is not currently reflected in the TTC’s 15-Year Capital Investment Plan as it is not a TTC project.

Waterfront East LRT (WELRT)

Funds for the Preliminary Design and Engineering (PDE) phase only are included in the TTC’s 2023-2032 Capital Budget and Plan for the WELRT project, as approved by the TTC Board on January 9, 2023, and by City Council on February 15, 2023. The total

approved budget for the TTC's current scope of work for the WELRT project is \$27 million, of which approximately \$21.8 million has been committed to date.

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

Equity/Accessibility Matters

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

All new stations, including interchange stations and connections to existing TTC facilities, will be designed to be accessible and in accordance with the Accessibility for Ontarians with Disabilities Act, 2005, (AODA) and the Ontario Building Code. All rapid transit stations will also be designed to provide connectivity with TTC Wheel-Trans, broadening its Family of Services.

As requested by the Board, Metrolinx has committed to conduct meaningful consultation with the TTC's Advisory Committee on Accessible Transit (ACAT) as part of the Project Specific Output Specification (PSOS) review and design review for all projects with the City of Toronto. This process began in August 2021 when ACAT's Design Review Subcommittee was consulted on the subway program accessibility requirements to be included in each subway project PSOS, as well as specific requirements and early concept designs for the stations to be built as part of the Ontario Line project.

Metrolinx and ACAT met again to review requirements and reference concept designs for the Line 2 East Extension (Scarborough Subway Extension project) and the Line 5 Eglinton West Extension (Eglinton Crosstown West Extension project) in November 2021 and February 2022, respectively. Recently ACAT was consulted for Ontario Line North as part of the PSOS development. ACAT consultation is expected to continue later in 2023 for the Line 1 Yonge Extension (Yonge North Subway Extension project).

The TTC will continue to ensure ACAT receives briefings on issues of the concept of operations and accessibility as the projects progress. The TTC is committed to ensuring ACAT is fully aware and consulted on issues of accessibility, and that the consultation is provided to Metrolinx to help inform planning and delivery.

Decision History

The following links contain the detailed transit network expansion updates that were presented to the TTC Board at its meetings on February 10, 2021, September 15, 2021, February 10, 2022, July 14, 2022, and February 28, 2023, respectively:

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

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

[February 10, 2022 Transit Network Expansion Update](#)

[July 14, 2022 Transit Network Expansion Update](#)

[February 28, 2023 Transit Network Expansion Update](#)

At its meeting on April 14, 2022, the TTC Board received a report on the Line 5 Eglinton Train Operating and Funding Agreement (TOFA) and “authorized the Chief Executive Officer of the TTC to enter into and execute the Train Operating and Funding Agreement, and any other necessary agreements, which shall be consistent with the Terms contained in Attachment 1, whereby the final agreement will be subject to terms and conditions acceptable to the TTC General Counsel.”

[April 14, 2022 Line 5 Eglinton – Train Operating and Funding Agreement](#)

[April 14, 2022 Decision](#)

In December 2020, Toronto City Council directed City staff to advance the Eglinton East LRT (EELRT) project concept as a Line 5 Eglinton easterly extension from Kennedy Station to Malvern Town Centre.

[EX 19.5 Update on the City’s Transit Expansion Projects – Fourth Quarter 2020](#)

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

Toronto City Council recently adopted a report at its June 15 and 16, 2022, meeting, with amendments, which is being transmitted to this meeting of the TTC Board for information and is being referred to in this report.

[EX33.2 Advancing City Priority Transit Expansion Projects – Eglinton East Light Rail Transit and Waterfront East Light Rail Transit](#)

As it relates to the TTC, City Council directed the following:

1. Eglinton East Light Rail Transit: The Executive Director, Transit Expansion Office, in consultation with the Chief Vehicles Officer, TTC, to complete an assessment of light rail vehicle options for the Eglinton East Light Rapid Transit distinct-service concept.

2. Waterfront Transit Network: The Executive Director, Transit Expansion Office, to undertake a constructability review of the Union Station to Queens Quay Link and the East Bayfront Light Rapid Transit (the Waterfront East Light Rapid Transit), in consultation with the Chief Planner and Executive Director, City Planning, the TTC and Waterfront Toronto, to assess constructability and co-ordination risks with major infrastructure projects in the vicinity of the Waterfront East Light Rapid Transit alignment.
3. Waterfront Transit Network: The Executive Director, Transit Expansion Office, in consultation with the Chief Planner and Executive Director, City Planning, the TTC and Waterfront Toronto, to report back to City Council in concert with reports on the Next Phase of Waterfront Revitalization anticipated in second quarter of 2023 with:
 - a. the recommended alignment and scope of the Project based on ongoing work and the review outlined above;
 - b. an updated cost estimate; and
 - c. a funding, financing, and implementation strategy, including a phasing plan.

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

[EX28.12 Metrolinx Subways Program – Real Estate Protocol and Land Valuation Principles for Subways and GO Expansion Programs](#) and [EX28.14: Ontario Line Downtown Stations – Temporary Road Closures and Community Impacts](#)

City Council adopted the following recommendations:

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

Toronto City Council also adopted a report at its June 14, 2023 meeting for the update on Metrolinx Subway Program.

[EX5.3 - Update on Metrolinx Subways Program - Second Quarter 2023](#)

City Council adopted the following recommendations:

1. City Council request the Province of Ontario to fund all associated costs required to deliver Cummer Station as part of the Yonge North Subway Extension.

2. City Council request the Executive Director, Transit Expansion to explore Federal infrastructure funding opportunities to contribute towards Cummer Station and to report back to the Executive Committee as part of the next transit expansion update report.
3. City Council direct the Chief Planner and Executive Director, City Planning, in coordination with the Executive Director, Corporate Real Estate Management and the Chief Executive Officer, CreateTO, to determine the level of funding that would be generated by Transit Oriented Communities developments around the intersection of Yonge Street and Cummer Avenue to be applied towards the construction costs of Cummer Station and to report back to the Executive Committee as part of the next transit expansion update report.
4. City Council direct the Chief Planner and Executive Director, City Planning to report back to the Executive Committee as part of the next transit expansion update report on the transit that will be needed to serve the projected growth for the area based on approved and planned developments in the absence of Cummer Station.
5. City Council request the Director, Transit and Transportation Planning to explore the cost of creating and posting signage in the Yonge Street and Cummer Avenue area beside every new development notice to announce that there is no plan or funding in place to build Cummer Station as part of the Yonge North Subway Extension and to report back to City Council on funding required to produce and install the signage.

In addition, Toronto City Council at its October 12, 2023 meeting directed staff to prepare the business case for Cummer Station.

[MM11.19: Last Chance to Urge Province to Build Cummer Station for the Future of North York](#)

1. City Council request the Province of Ontario to fully fund the design and construction of Cummer Station as part of its Yonge North Subway Extension project to support 15,000 present and future Toronto residents, including through use of possible offsets such as:
 - a. proceeds of Transit-Oriented Community opportunities from developments surrounding the proposed Yonge North Subway Extension Cummer and Steeles Stations; and/or
 - b. potential federal infrastructure funding.
2. City Council request the Province of Ontario to direct Metrolinx to protect for Cummer Station as part of their procurement documents for the Yonge North Subway Extension.
3. City Council direct the Chief Planner and Executive Director, City Planning, and the Executive Director, Transit Expansion Office, in consultation with the Toronto Transit Commission to prepare the business case for Cummer Station, as presented to City Council, in the Report (June 26, 2023) from the Executive Director, Transit

Expansion on City of Toronto Recommendations for Metrolinx's Ontario Line Construction within the Toronto and East York District, and report to the December 13, 14, and 15, 2023, meeting of City Council.

4. City Council request the Mayor to present the business case for Cummer Station, requested in recommendation 1 above, to the Premier of Ontario and request full funding for Cummer Station.

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 this 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 for the TTC's transit network during transit expansion project delivery and once the new transit lines open for service.

Transit expansion programs, such as the Provincial Priority Subway Program and Provincial LRT Program, are governed by a 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 co-ordination and oversight of the work. The TTC uses these forums to advance the interests of the TTC in accordance with Board direction.

Comments

Toronto Rapid Transit Network Expansion

Major expansion and capacity improvements to the TTC network are underway. Key programs and projects are highlighted in Table 3 below:

Table 3: Rapid Transit Network Expansion Programs and Projects

Program	Project	TTC Line	Current Phase	Anticipated In-Service
Provincial LRT Program	Eglinton Crosstown	Line 5 Eglinton	Construction	TBD*
	Finch West LRT	Line 6 Finch West	Construction	TBD*
Provincial Priority Subway Program	Ontario Line	Future Line 3	Procurement/ Construction	2031**
	Scarborough Subway Extension	Line 2 Bloor-Danforth	Advance Tunnel Contract: Construction; Stations/Rail/Systems: Design development	2030**
	Yonge North Subway Extension	Line 1 Yonge-University	Advanced Tunnels Contract: Procurement Stations/Rail/Systems: Planning Finch Early Works: Construction	2032**
	Eglinton Crosstown West Extension	Line 5 Eglinton	1st Advance Tunnel Contract: Construction; 2nd Advance Tunnel Contract: Procurement Elevated Guideway Contract: Procurement Stations/Rail/Systems, Planning	2031**
Provincial Subway Program	Line 4 Sheppard Extension	Line 4	Prepare for Concept Definition	TBD*
Eglinton East LRT Extension		Line 5 Eglinton	Planning	TBD
Waterfront Transit	Waterfront Transit – Waterfront East	Various streetcar routes	Preliminary Design and Engineering	TBD

Program	Project	TTC Line	Current Phase	Anticipated In-Service
	Waterfront Transit – Exhibition Loop- Dufferin Gate Loop	Various streetcar routes	Preliminary Design Project on hold pending evaluation of Ontario Line impact	TBD
Bus Rapid Transit (BRT)	Durham-Scarborough BRT	Various TTC and regional bus routes	Preliminary Design	TBD
	Dundas BRT	Various TTC and regional bus routes	Concept Definition	TBD

* Updated schedule to be provided by Metrolinx.

** Preliminary schedule provided by Metrolinx. To be confirmed by Metrolinx and their contractors upon conclusion of the Development Phase of the projects.

Provincial LRT Program – Line 5 Eglinton

The TTC continues its operational readiness planning for revenue service, and is in active conversations with Metrolinx to refine the actual opening date. The TTC’s operational readiness continues to be on track with hiring and training of the various positions that are required to support the operations of Line 5 Eglinton.

From a training perspective, the TTC resumed training activities on August 8, 2023 with TTC Instructors on the full alignment under Crosslinx Transit Solutions (CTS) instruction. The readiness of the vehicles, systems, and infrastructure still has work to be completed to allow for TTC Instructor certification, which is expected in Q4 2023. TTC Instructors continue to provide feedback to CTS in an effort to improve the readiness of the asset. All project partners are working collaboratively with the goal of finalizing all training cohorts of Instructors and ensuring the line is in a state that reflects the operating environment prior to commencing Operator training.

From a Testing and Commissioning (T&C) perspective, the TTC continues to work closely with the City and Metrolinx to understand and refine the T&C plan and the TTC’s role. Currently, the T&C process used by Crosslinx Transit Solutions (CTS) involves defining sub-system packages and their technical, safety and security requirements. For each of those packages, an Inspection and Test Plan (ITP) is developed, to ensure all the sub-system requirements are implemented, verified and validated. The ITPs are continuously being updated as progress is made toward completion, as defined in a Quality Assurance process developed by CTS. Metrolinx has established a commissioning team to review and approve each of the packages. The commissioning team is actively involved in reviewing the documentation and witnessing testing as it progresses.

As the ECLRT project progressed in 2023, the TTC's supporting effort to the Project increased in order to prepare TTC operating staff for the system's eventual revenue service operation. Part of the effort involved is working collaboratively with Metrolinx and CTS to perform due diligence reviews of testing and commissioning reports and safety documentation to ensure the system's readiness and safety for the TTC's Instructor and Operator training activities. The TTC is also actively engaged in discussions and reviews with all stakeholders of the Project.

After extensive collaborative negotiation between the TTC, Metrolinx and City of Toronto, the Train Operating and Funding Agreement (TOFA) was signed by all parties in August 2023. This has marked a great achievement for the Project, since it is the first agreement of its kind. All parties will continue to work together in resolving any outstanding items that require resolution prior to revenue service.

Provincial LRT Program – Line 6 Finch West

The TTC has initiated mobilization efforts to integrate Line 6 Finch West into the TTC network, and is in active conversations with the City and Metrolinx to refine the actual opening date. The TTC continues working collaboratively with Metrolinx to ensure the TTC's operational readiness activities are integrated into the overall project schedule developed by Mosaic Transit Group (MTG).

In an effort to assist the overall Project, Metrolinx has requested for the TTC to assist in the development of the Operator Training Program. In the spirit of collaboration, the TTC has agreed to develop this training program, and is working closely with MTG on becoming subject matter experts to assist with the development of the training materials. In addition, the TTC is working very closely with Metrolinx to develop contingency plans in the event that Line 5 Eglinton and Line 6 Finch West open up in proximity of each other.

Now that the Line 5 Eglinton TOFA has been signed, further discussions will progress for the Line 6 operating agreement with the Line 5 TOFA as the baseline. The TTC anticipates there will be very few modifications since the operating and maintenance responsibilities and requirements are similar for both lines, supporting a consistent service delivery for TTC customers, despite having a different maintainer company. To date, Metrolinx and the TTC have been in conversations to identify potential differences between the Line 5 TOFA and the Line 6 Train Operating and Services Agreement (TOSA).

The TTC, Metrolinx, and MTG are working together in commissioning the Finch Maintenance Storage Facility (FMSF), which will be occupied by TTC staff for the operations of Line 6 Finch West. The FMSF will be a shared facility with the Maintainer and Metrolinx, where the TTC will occupy partial first and second floor to support operations and training activities. MTG anticipates handing over the FMSF to Metrolinx and the TTC by Q4 2023.

Provincial Priority Subway Program

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

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

As the network operator, the TTC must provide a seamless and reliable customer journey. This will include a consistent fare payment experience for TTC service, wayfinding, and an overall seamless customer experience consistent across the TTC network.

Additional program updates since the previous Transit Network Expansion Board report are provided below:

Open Works in Progress

Wayfinding and Branding

The TTC Signage and Wayfinding Standards have been designed to provide the best possible customer experience for TTC customers and meet Accessibility for Ontarians with Disabilities Act, 2005, (AODA) and Ontario Building Code (OBC) requirements. They draw guidance from Canadian Standards Association (CSA) and International Organization for Standardization (ISO) guidelines, and incorporate existing TTC operational requirements while anticipating the requirements for future expansion projects. Since 2012, the TTC has been implementing one consistent standard across the entire TTC network.

These Standards have been made available to expansion project design teams under the guidance of Metrolinx. Their delivery of future transit expansion to the TTC system must provide an optimum customer experience that is consistent throughout the network. The Standards have been designed with this objective in mind, and TTC staff will continue to support Metrolinx, as required, to reach this goal and to ensure that the provincially-led extensions and expansions to the TTC transit network have wayfinding and branding that is consistent with the rest of the TTC system.

In particular, TTC staff are working to get a commitment from Metrolinx staff to ensure that TTC logos, wayfinding, and signage will be featured appropriately on provincially owned stations in the TTC network to ensure seamless and safe operation. The intent is that an interim solution will be agreed to for Line 5 Eglinton in time for the opening of this line, and with a final agreed solution to be applied to Line 6 Finch West and to the four provincial subway projects listed above.

Public Washrooms

As a proud leader in providing accessible and reliable public transit, the TTC is committed to continuously improving the customer experience across our transit network. This includes providing public washrooms to our customers at all new stations and at interchange stations and connections to existing TTC stations.

However, Metrolinx has indicated that public washrooms will only be provided at terminal stations and interchange stations for the Provincial Priority Subway Program. The TTC is working through the program governance structure to ensure proper requirement for public washrooms will be adopted for the provincial subway program.

Line 3 Bus Replacement Program

As directed by the Board, the TTC planned to replace the train service on Line 3 Scarborough with an express bus service. The last day for Line 3 train service was planned for November 18, and express buses were scheduled to start running the following day on November 19. However, on July 24, 2023, a southbound Line 3 train departing Ellesmere Station had its trailing car uncouple and derailed. Since then, TTC staff have been working with external rail consultants to investigate the incident, and shuttle buses have been operating as a replacement service for Line 3. For details of the incident investigation and bus replacement service, please refer to [Line 3 Bus Replacement Update report](#) and [presentation](#).

As outlined in the September 26, 2023 report, the TTC has been implementing operational improvements to the bus replacement service in phases. This includes making targeted improvements at Kennedy Station to reduce congestion for customers; implementing temporary bus priority lanes, including enforcement signage; and implementing the full suite of transit priority measures. The full suite of transit priority measures includes RapidTO style, red-painted bus priority lanes, expanded bus stop pads, queue jump lanes, intersection modifications and transit signal priority.

The TTC is also progressing to final design on the busway conversion and this will be complete by Q2 2024. An updated cost estimate will be available in Q4 2023, and the TTC will also re-engage with customers and stakeholders on feedback on the updated busway design. Additional funding is required to construct the busway conversion as well as the demolition of any surplus Line 3 infrastructure following the conversion of a portion of the Line 3 ROW for buses.

The City of Toronto's Transit Expansion Office is currently negotiating a new Toronto-Ontario Subway Agreement in Principle (AIP), which addresses a range of outstanding matters from the 2019 Toronto-Ontario Preliminary Agreement. The scope of the AIP includes the recovery of costs associated with the SRT and reconciliation of sunk costs associated with the upload of expansion projects. Through this process, the Province has been requested to assume responsibility for incremental costs of the Line 3 bus replacement service.

TTC staff have identified the funding need for the SRT as a financial pressure for 2023, and will continue to work with the City to secure the required funding for the Project. There is yet to be a commitment from the Province to fund the full requirements of this Project. Funding is required in order to advance the busway conversion to construction and implementation.

Interdependency – New Subway Trains (NST) and Provincial Subway Extensions

The SSE, which is being planned and delivered by Metrolinx, is forecasted to be completed by 2030 and will require the procurement of seven trains to meet the service requirements of the extended line on opening day. Also, in order for Metrolinx to test and commission the new extension line, the SSE will need access to up to six trains starting in late 2029 to achieve a late-2030 opening date.

Similarly, the YNSE, which is being planned and delivered by Metrolinx, is forecasted to be completed by 2032, and it will require the procurement of eight trains to meet the service requirements of the extended line on opening day. It will also require access to up to seven trains starting in 2031 to support testing and commissioning activities.

Both subway extensions above heavily depend on the TTC's NST procurement to procure the additional trains required for the service of the extensions. For detail risk and impact assessment, please refer to the New Subway Train Procurement and Implications for Line 2 and Line 1 Modernization and Capacity Enhancement Report that is included on the November 22, 2023 TTC Board agenda.

Provincial Priority Subway Program Status Updates

Ontario Line (OL) Updates

Queen Streetcar Diversions

The construction at Queen Station for the Ontario Line requires the long-term closure of Queen Street, between Bay Street and Yonge Street, and between Yonge Street and Victoria Street. Currently, the TTC, City, and Metrolinx staff are working collaboratively to restore streetcar tracks southbound on York Street (between Queen Street and Adelaide Street) and eastbound on Adelaide Street (between Charlotte Street and Victoria Street) to allow the TTC to operate a streetcar diversion for customers that is as close to Queen Street as possible, that will not require the need for long-term shuttle buses, and will provide necessary resiliency for streetcar service on King Street. The diversion for the streetcar service on Queen will be westbound via Church, Richmond, York to Queen; and eastbound via York, Adelaide, Church to Queen on the new restored streetcar tracks. The civil work is currently underway by the City and Metrolinx contractors, and is expected to be completed early next year for the TTC to perform track work and Overhead Contact System (OCS) work.

Lakeshore East Joint Corridor

Metrolinx started the Joint Corridor early works contract in Q2 2023. The early works project involves the expansion of the existing Metrolinx Lakeshore East rail corridor. The Project includes the detailed design of three additional tracks: one additional GO track and two Ontario Line tracks, as well as bridge reconstruction at Queen Street East and Gerrard Street East and other bridges along the corridor. The TTC has started the work with Metrolinx and their early works contractor. This work includes the installation of a new bridge mount for OCS cables to new bridge on Queen Street. Two temporary TTC pole relocations and removal of existing poles at Gerrard Street Bridge will also be required.

The Lakeshore East Joint Corridor related work described above requires periodic short-term and extended shutdowns of the Queen East streetcar tracks. Bus replacement service has been planned during the periods when streetcar tracks are non-operational. Co-ordination of the replacement bus service is currently ongoing between the City, Metrolinx and the TTC.

Scarborough Subway Extension (SSE) Updates

Kennedy Station Works

As part of the Kennedy Enabling Work (KEW) under the Scarborough Subway Extension (SSE) Project, a new West Ventilation Fan Plant (WVFP) will be added to the west of the Kennedy Station above the existing Line 2 tunnel structure. Early works to relocate the existing infrastructure conflicts is anticipated to commence in Q4 2023. Also, the early works for SSE in the Kennedy Station tail track area was started in June 2023 to construct additional back-of-house service rooms.

Advanced Tunnelling Work

The tunnel boring machine (TBM) was launched on January 16, 2023, from the launch shaft at the future Sheppard East Station site, located at the northeast corner of Sheppard Avenue and McCowan Road, and the tunnelling work is ongoing along the SSE alignment.

Station Rail Systems (SRS) Work

The TTC is working closely with Metrolinx and the SRS Contract Development Partner to develop the stations design as well as the linear infrastructure design.

Station Planning

The TTC, City of Toronto, York Region, and Durham Region are working with Metrolinx to determine appropriately sized bus terminals and on-street bus connections at the future Scarborough Centre and Sheppard-McCowan stations.

Scarborough Centre: While progress has been steadily made to advance the planning and design of the bus terminal, there are still some gaps with aligning the interests of all stakeholders, including Metrolinx, the City of Toronto, and Infrastructure Ontario. In particular, the TTC's requirements on the number of bus platforms to serve customers, terminal access points, and improving the customer experience have not been fully satisfied. Upon completion, the new Scarborough Centre Station will have the busiest bus terminal in the network. To serve customers effectively at this new station, the bus terminal must be designed to allow customers to have a seamless and quick journey, and it must be able to accommodate future ridership growth in Scarborough. The TTC continues to engage Metrolinx on developing a path forward to address these issues.

Sheppard East: The TTC worked with YRT to include their services in the future Sheppard East Station bus terminal, which will now house the TTC, DRT and YRT. The terminal is sized appropriately to accommodate the 2031 Service Plan. Metrolinx recently shared a proposal to convert the planned fare-paid terminal into a non-fare paid terminal. The TTC has stated the desired position to keep the terminal fare-paid to provide the optimal integrated customer experience. Discussions on this matter are still ongoing.

Yonge North Subway Extension (YNSE) Updates

Finch Early Works

The Finch Early Works Design-Bid-Build contract was awarded by Metrolinx in September 2022. Construction started in February 2023. TTC staff will provide support within the Finch Traction Power Substation (TPSS), within Finch Station and along the Finch tail tracks throughout construction.

Station Planning

In April 2021, the Province announced that the Line 1 Yonge North Extension would have three confirmed stations (Steeles, Bridge, and High Tech) with one 'Neighborhood Station' at Cummer-Drewry, Clark, or Royal Orchard. In July 2021, the Province confirmed Clark as the fourth station and indicated they would work with municipalities to include additional potential stations at Cummer-Drewry and Royal Orchard. In April 2022, the Province announced the addition of Royal Orchard Station to the Project. Currently, the five confirmed stations are: Steeles, Clark, Royal Orchard, Bridge, and High Tech.

In June 2023, City Council requested the Province of Ontario to fund all associated costs required to deliver Cummer Station as part of the YSNE. The TTC continues to believe that Cummer-Drewry would be an appropriate addition to the transit network in Toronto, and would provide important additional rapid transit connections for existing and future TTC customers.

The TTC, City of Toronto, York Region, and the cities of Markham and Vaughan are working with Metrolinx to determine an appropriately sized bus terminal and on-street bus connections at Steeles Station and protect for future rapid transit services on Steeles Avenue. The TTC forecasts this will be a busy bus terminal with high volumes

of customers transferring between the surface bus network and the new subway. It is critical to design this terminal and on-street facilities to meet future demand to ensure customers have a seamless, accessible, safe, and convenient experience.

In particular, this means designing on-street bus facilities to support current operations and protect for future operations along the Steeles corridor, which will likely include a future BRT service. For the Steeles Avenue bus routes, the City of Toronto, York Region, the cities of Markham and Vaughan, and TTC staff have informed Metrolinx of their preference to include centre median bus platforms (CMBP) into the project scope to better connect with the high volume of Steeles Avenue buses. Having appropriate on-street facilities will also reduce the number of bus platforms needed at the off-street bus terminal since bus routes could serve on-street instead of needing to loop into a bus terminal. It is the position of TTC staff that the CMBP is a proven design to best meet customer demand and be compatible with the high volume of buses servicing Steeles. Metrolinx is hosting workshops to develop and evaluate both base and CMBP scope, before making a recommendation to senior staff.

Crosstown West Extension (ECWE) Updates

Advanced Tunnelling Work

The first TBM was launched in April 2022 from the launch shaft, and the second TBM was launched in August 2022.

Provincial Subway Program: 12 Months Major Milestones

Milestone Description	Completed	Upcoming
Ontario Line		
OL Queen Street Closure Construction Start	May 2023	
OL Joint Corridor Early Work Contract Award	July 2023	
OL North Civil Works Package – Pape Advanced Work – Headhouse and TVS Modifications – DBB Award		November 2023
OL North Civil Works Package – Pape Support of Excavation (SOE) – DBB Award		December 2023

Milestone Description	Completed	Upcoming
OL North Civil Works Package – Pape Tunnel and Underground Stations (PTUS) – Progressive Design-Build – Preferred Proponent Award		February 2024
Scarborough Subway Extension		
SSE – Advance Tunnel Contract		
LS2 Construction Complete		September 2024
SSE – Station, Rail and Systems (SRSCo) Contract		
SRS-Development Phase Close		Q4 2024
Yonge North Subway Extension		
YNSE – Finch Early Works (*FEW)		
FEW Construction start	February 2023	
YNSE – Advanced Tunnel Contract (ATYNSE)		
Advance Tunnel RFQ Issued	April 2023	
Advance Tunnel RFQ Closed	July 2023	
Issue Advance Tunnel RFP		Fall 2023
Close Advance Tunnel RFP		Spring 2024
Eglinton Crosstown West Extension		
Advance Tunnel 2 (ECWEATC2)		
Contract Awarded	April 2023	
Elevated Guideway (ECWEEGW)		
Contract Awarded	February 2023	
Stations, Rail and Systems (ECWESRS)		
RFQ Issue		Winter 2023

City Priority Transit Projects

Waterfront Transit – Waterfront East LRT

The Waterfront East LRT (WELRT) project is one of the City's priority transit projects. The Project will expand the streetcar network in a dedicated right-of-way from Union Station, along Queens Quay East to Cherry Street, to serve the growing East Bayfront and Port Lands neighbourhoods. The WELRT will address transit needs for the Toronto Waterfront by providing sustainable, reliable and higher-order transit service along Queens Quay, Cherry Street and Commissioners Street with a forecasted ridership of more than 50,000 daily rides. The WELRT extends the Central Waterfront Master Plan goal of developing the waterfront into a vibrant and inviting destination eastward while supporting the City's objective to strengthen and support the prosperity of the eastern waterfront. It will support the redevelopment of the waterfront and will be a key enabler of residential densification and, in particular, the development of affordable housing.

To mitigate and manage co-ordination risks with future construction for the WELRT project, and other major infrastructure projects in the same vicinity, the City has completed a constructability review. This review looked at the schedule and scope for projects, such as the Ontario Line, GO Expansion On-Corridor works, and the Gardiner Expressway Rehabilitation, to assess construction co-ordination risks and develop mitigation strategies.

The TTC is collaborating with the City and Waterfront Toronto to deliver the Project, organized into two segments with three defined area boundaries. The TTC delivers the underground segment from Union Station to a portal west of Yonge Street (Area 1), and Waterfront Toronto delivers the at-grade segment along Queens Quay East to the Port Lands (Areas 2 and 3).

The TTC, City, and Waterfront Toronto have advanced the design for the Project to a 30% preliminary design. The TTC project team worked closely with the City and Waterfront Toronto to complete the Preliminary Design and Engineering phase project deliverables (including a Preliminary Design Business Case and Environmental Project Report for the Transit Project Assessment Process).

The City prepared a project status update report, with input from the TTC and Waterfront Toronto, for the November 8, 2023, City Council meeting. The report recommends an interim funding strategy and implementation plan to advance specific WELRT Areas 2 and 3 project segments to 60% design, and to report back to Council with an update on the phasing of the Project at a later date. City Council staff report attached for reference: [Advancing the Waterfront East Light Rail Transit](#).

Eglinton East LRT

In December 2020, (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.EX19.5>), City Council directed City staff to advance the Eglinton East LRT (EELRT) project concept as a Line 5 Eglinton easterly extension from Kennedy Station to Malvern Town Centre.

In February 2022, (<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2022.MM39.8>), City Council further directed City staff to undertake a constructability exercise to resolve alignment issues at Kennedy Station, evaluate the suitability of a Maintenance and Storage Facility (MSF) at the Metrolinx-owned Conlins site, and work with Metrolinx to protect for higher-order transit connections at Kennedy and Sheppard-McCowan stations on the Line 2 East Extension (L2EE). This resulting analysis, undertaken by City staff and consultants, revealed significant issues with the interface at Kennedy Station between the EELRT and L2EE.

Through this work, City staff concluded that there is no feasible solution at Kennedy Station to continue with a through-service alignment. The key challenge is that the EELRT tunnel box would rest directly on top of the L2EE bored tunnel with less than two metres of separation estimated between the two tunnels. Since the L2EE bored tunnel has not been designed to support the load of an LRT tunnel above it, the structural integrity concerns are significant. Since a redesign of the L2EE tunnel is not feasible, a through-service alignment cannot be implemented. As an alternative, City staff have identified a distinct service concept where the EELRT would operate as a standalone line.

A standalone line for EELRT (a new “Line 7 Eglinton East”) creates new opportunities and potential benefits, including cost savings, a shorter construction duration, reduced property impacts, and design flexibility by avoiding dependency on Line 5 Eglinton vehicle, operations, and maintenance requirements.

Additionally, a new extension of the EELRT via Sheppard Avenue between Neilson Road and Sheppard-McCowan Station was formally included into the Project, effectively connecting both ends of the EELRT to Line 2 subway stations and future major transit hubs.

Further analysis is required to confirm potential benefits and refine the distinct-service concept. The TTC will work with the City to advance the TPAP and 10% design for the distinct-service concept from Kennedy Station to Malvern Town Centre, with an at-grade connection at Kennedy Station, and the Sheppard Avenue segment from Neilson Road to McCowan Road. An updated Initial Business Case and Class 4 cost estimate will be provided to City Council in Q3 2023.

RapidTO

Over the years, 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 and speed on some of the busiest surface transit routes in the TTC network within Toronto, and to better connect regional transit systems to the TTC system.

The TTC’s 5-Year Service Plan & 10-Year Outlook (2020-2024) identified the need to explore enhanced bus lanes on five roadways in Toronto. The TTC is also working with the City of Toronto to develop a wider program to identify a series of priority roadways and study the application of different options of transit priority solutions over the next 10

years. That wider program called, RapidTO: Bus & Streetcar Priority, has completed Phase 2 of public and stakeholder consultations and a report on the findings of Phase 2 will be presented to City Council in Q4 2023. Upon approval by City Council, the TTC will work with the City on Phase 3 (2022-2031), which includes undertaking roadway-specific studies to determine the feasibility, benefits and impacts of various transit priority measures, similar to what is being undertaken for RapidTO: Jane Street.

Meanwhile, the TTC and the City have jointly been working to advance the roadways identified in the 5-Year Service Plan & 10-Year Outlook. The first RapidTO roadway, Eglinton Avenue East/Kingston Road/Morningside Avenue, introduced bus lanes in 2020. The results so far show significant service improvements for TTC customers, with transit travel time savings of up to five minutes in the peak periods, an average reliability improvement of 10% during the peak hour, and ridership recovering faster than system-wide bus ridership. Car volumes and travel times remain at the same or lower level than the fall 2019 baseline.

The TTC and the City continue to advance work on Jane Street, the second RapidTO roadway. The project team has completed technical analysis and preliminary designs for five options on Jane Street. In spring 2023, we completed Step 1 consultation. Public and stakeholder consultations were conducted to collect information about Jane Street roadway user needs, challenges and priorities. Following the incorporation of public feedback, staff will conduct Step 2 public and stakeholder consultation on the preferred design option. At the conclusion of Step 2, staff will present the recommended design and implementation plan to the TTC Board and City Council for approval.

Additionally, a feasibility study is underway for a segment of Steeles Avenue at Yonge/Steeles and is being co-ordinated with Metrolinx's Yonge North Subway Extension project. Finch East, Dufferin Street and Lawrence East feasibility studies are planned for 2024 and 2025.

Durham-Scarborough BRT

The Durham-Scarborough Bus Rapid Transit (DSBRT) is a Metrolinx-led project that will provide approximately 36 kilometres of dedicated transit infrastructure that will connect Oshawa, Whitby, Ajax, Pickering, and Toronto. This rapid transit corridor would be used by TTC buses as well as buses from Durham Regional Transit (DRT) and GO Transit. There are 49 DSBRT stops planned along the corridor, with 14 stops located within the City of Toronto. These stops will provide connections to Toronto destinations, such as Line 2 East Extension at Scarborough Centre Station, ALDGate Centre, Scarborough Centenary Hospital and University of Toronto Scarborough Campus. Additionally, the DSBRT will connect with the City's EELRT project at University of Toronto Scarborough Campus on Ellesmere. Bus services will generally operate in the centre of the road with centre-median bus platforms at stops – where this cannot be accommodated, bus services will operate on the side of the road and serve curbside stops. During the peak periods, the combined bus service on the DSBRT in Toronto, between the TTC, DRT and GO Transit, will have service every two minutes in each direction. TTC customers and TTC buses will make up the majority of customers using the BRT facility in Toronto.

The Project completed a TPAP in January 20, 2022, and is now advancing to preliminary design business case. Technical work is currently underway, including ridership modelling, cost-benefit analyses, and economic and financial analyses. Through the design process, a number of outstanding challenges that require additional analysis and mitigation measures will be addressed, such as impacts on goods movement operations along the corridor, particularly around Markham Road, and impacts to multimodal traffic operations in the residential neighbourhood areas on Ellesmere Road, between Military Trail and Kingston Road, and the interface and co-ordination between the DSBRT and EELRT projects around University of Toronto Scarborough Campus.

Dundas BRT

The Dundas Bus Rapid Transit (BRT) project is a Metrolinx-led project that will provide approximately 48 kilometres of dedicated transit infrastructure that will connect Hamilton, Burlington, Oakville, Mississauga and Toronto. The infrastructure will connect McMaster University in Hamilton and the Kipling Transit Hub in Toronto. This rapid transit corridor would be used by TTC buses, while in Toronto, as well as buses from other regional services.

Metrolinx is currently advancing the Toronto segment through the Preliminary Design Business Case, which will confirm the service concepts, define the required infrastructure to support the service concept at the preliminary design stage, with the goal of advancing to TPAP in Q2/Q3 2024.

Next Steps

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

Staff will continue to report to the Board on progress of the transit expansion activities with the next program update in spring 2024.

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