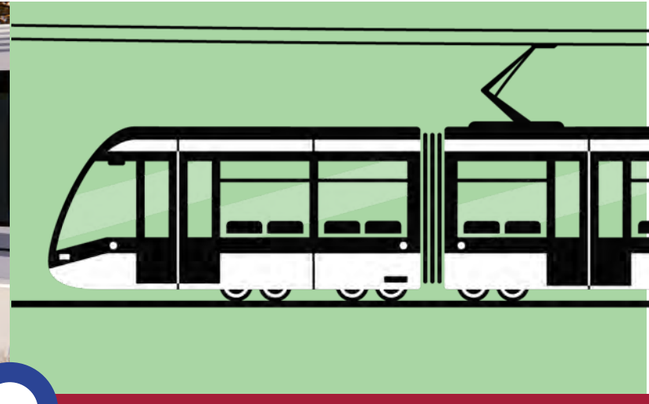
Environmental Project Report

Eglinton East Light Rail Transit Project

CITY OF TORONTO & TTC



Executive Summary

The City of Toronto and the Toronto Transit Commission (TTC) (collectively known as the Proponents) are seeking environmental approval for the Eglinton East Light Rail Transit ('EELRT' or 'the project'). A portion of the project was approved as part of the 2007 Transit City Plan in 2009. In September 2021, the 10% design process of the Transit and Rail Project Assessment Process (TRPAP) was initiated.

The purpose of this Environmental Project Report (EPR) is to document the TRPAP by providing:

- A review of past planning activities related to the project;
- A description of the transit project, including a description of the preferred design;
- A summary of existing conditions;
- An analysis of the project's benefits, impacts, and associated mitigation and monitoring measures;
- A record of engagement and feedback; and
- A list of future commitments.

Please note that the EPR was drafted following the change in the assessment process name from transit project assessment process (TPAP) to transit and rail project assessment process (TRPAP), though some supporting studies were completed prior. All future instances of "transit project assessment process" and "TPAP" in this document and its appendices refer to the transit and rail project assessment process.

Artist's concept, subject to change.

Project Background

The EELRT includes the implementation of light rail transit (LRT) and extensive public realm improvements including landscaping, cycling, and pedestrian infrastructure along Eglinton Avenue East, Kingston Road, Morningside Avenue, New Military Trail, Sheppard Avenue East, and Neilson Road between Kennedy Station and the future Line 2 terminus at Sheppard and McCowan with a spur along Neilson Road from Sheppard Avenue East to Tapscott Road.

The EELRT was originally conceived as an extension of Line 5 with a partially at-grade and tunneled alignment. As a result of constructability challenges at Kennedy Station with the Scarborough Subway Extension, the current distinct service alignment was adopted. The distinct service alignment would avoid the following adverse impacts compared with a through service:

- Estimated additional $2.1 billion ($2022) in upfront property, construction, and vehicle.
- Delayed EELRT opening by three to four years.
- Nearly 20-year construction period at Kennedy-Falmouth when accounting for both SSE and EELRT construction, which is six to eight years longer than the distinct service option.
- Extensive property impacts along the north side of Eglinton between Midland Avenue and Bimbrok Road, displacing local businesses and curtailing transit-oriented development potential.
- Significant interface risks with SSE and reaching commercial agreements with Metrolinx and Crosslinx with regards to Line 5 through service on the EELRT.

Decoupled from Line 5, EELRT design requirements can be customized to meet the unique characteristics of the corridor. The benefits of the distinct-service concept include:

- Avoiding dependency on the Line 5 technology, vehicles, operations, and maintenance requirements.
- Ability to tailor EELRT service to the projected demand east of Kennedy Station to provide operational flexibility while improving service.
- Opportunity to acquire light rail vehicles that are tailored specifically for the EELRT including shorter and higher performance trains.
- With shorter trains, eliminating the need for a tunnel alignment on Kingston Road between Lawrence Avenue and Morningside Avenue.
- With higher performance trains, avoiding the need for a new LRT bridge across the Highland Creek valley.
- Shorter platforms to reduce property impacts.
- The resulting significant cost savings compared with the through-service option.

Based on these benefits, City Council in June 2022 approved advancing the 10% design for the EELRT as a distinct-service with an at-grade interface at Kennedy Station, from Kennedy Station to Malvern Town Centre, and for the Sheppard Avenue segment from Neilson Road to

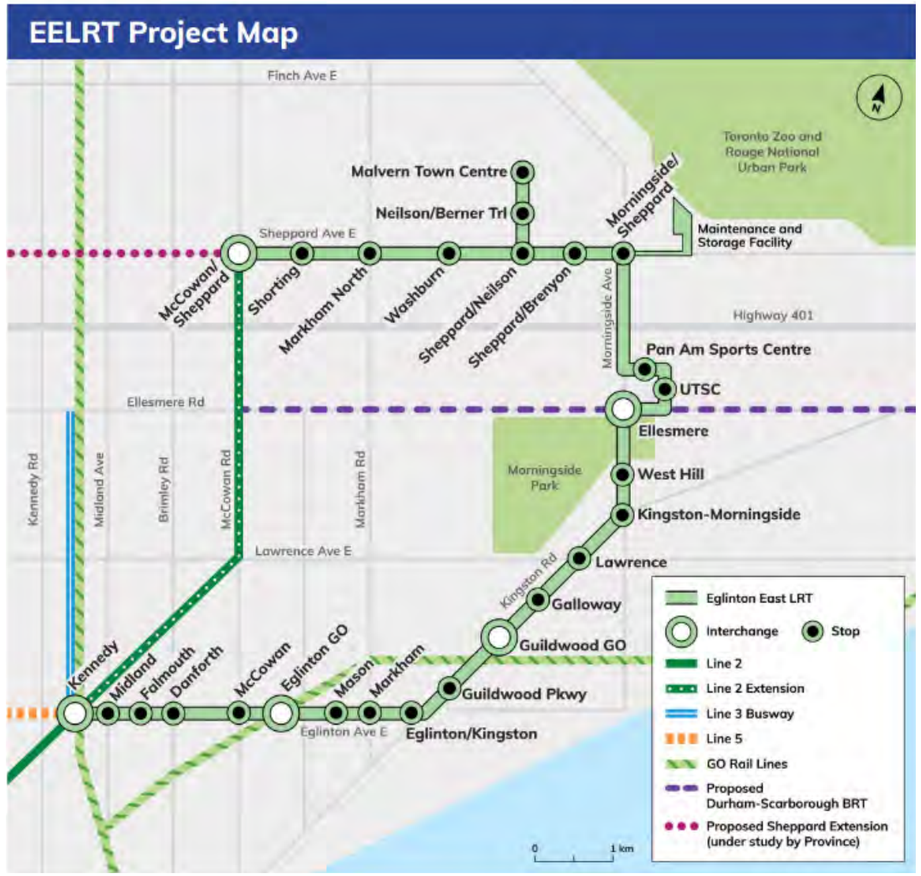
McCowan Road. The EELRT alignment including stations and a preferred Maintenance and Storage Facility (MSF) at Conlins Road and Sheppard Avenue East was approved by Toronto City Council in December 2023.

Project Description

The EELRT is a proposed 18.6 km light rail transit system in Scarborough in the City of Toronto. The EELRT will travel at-grade on a semi-exclusive LRT guideway, following existing or planned streets. The line will run from Kennedy Station to Malvern Town Centre via the University of Toronto Scarborough Campus (UTSC), with a connection to the future Line 2 terminus at Sheppard Avenue and McCowan Road. Key features of the project consist of:

- 18.6 km of revenue trackage and 0.8 km of non-revenue trackage.
- Proposed service frequency of 4-5 minutes during peak periods.
- 27 stations / stops along the alignment, designed for level boarding and barrier-free access, including:
  - A connection to Line 2 (Bloor-Danforth) and Line 5 (Eglinton Crosstown LRT) at Kennedy Station.
  - A connection to the Scarborough Subway Extension (SSE) and Line 2 through the future station at Sheppard-McCowan, which may also connect to the Sheppard (Line 4) Extension being explored by the Province.
  - Three connections to GO regional rail at Kennedy, Eglinton, and Guildwood GO stations.
  - Three stops near and on the University of Toronto Scarborough Campus (UTSC) to align with proposed UTSC Master Plan, including two connections with the proposed Durham-Scarborough Bus Rapid Transit (DSBRT).
- Preferred Maintenance and Storage Facility (MSF) at Conlins Road and Sheppard Avenue (8300 Sheppard Avenue East).
- 16 Traction Power Substations (including one located within the MSF site) to provide the necessary power for the EELRT.
- Incorporation of public realm improvements throughout the corridor, primarily through the implementation of 'Complete Streets' enhancing multi-modal transportation options by providing dedicated and safe bicycle and pedestrian infrastructure.
- Support for other key City priorities, including TransformTO Net Zero Strategy and Vision Zero Plan.
- Modifications to seven existing bridges / crossings.
- Maximum vehicle length of 50 m.

At the functional 10% design stage, the EELRT design is subject to future refinement and further development. Elements such as the service concept, vehicle technology, LRT station and stop amenities, streetscaping, maintenance and storage requirements and property impacts will be confirmed in future phases of the design.



Project Vision and Key Benefits

The EELRT will provide rapid transit service to historically underserved communities in the City, travel through or adjacent to seven Neighbourhood Improvement Areas and Emerging Neighbourhoods and bring higher-order transit within walking distance of an estimated additional 81,000 people in 2041. By providing convenient connections to other transit services such as subway and GO, the EELRT will also provide more transportation options for residents in eastern Scarborough.

More than a transit project, EELRT will also bring significant public realm improvements throughout the corridor, primarily through the implementation of 'Complete Streets' design principles. Among other improvements, Complete Streets designs enhance multi-modal transportation options by providing dedicated and safe bicycle and pedestrian infrastructure along the LRT corridor.

The following encapsulate the vision and key benefits of the EELRT project:

- EELRT is a City of Toronto priority transit expansion project.
- EELRT aims to provide high quality, higher-order transit service in a dedicated right-of-way to underserved communities in the City.
- EELRT supports future growth and development of complete communities.
- EELRT serves local destinations and connects Scarborough to other higher-order transit projects.
- EELRT primes the opportunity for an LRT network in Scarborough.
- EELRT is a distinct line fit for purpose and is to facilitate strategic connections and transfers to the greater transit network.
- EELRT is a transit project, but also Complete Streets retrofit, infrastructure renewal, Vision Zero, and TransformTO project.

Summary of The Planning Process

Several studies have been prepared for the project in support of the TRPAP. The findings of these studies as they relate to the existing conditions in the study area and to the impacts of the project are summarized below. A summary of consultation is also provided.

Existing Conditions

The project study area (defined in Section 1.4 of the EPR) is located entirely in Scarborough, the eastern part of the City of Toronto. The LRT alignment begins at Kennedy Station travelling along Eglinton Avenue East, Kingston Road, Morningside Avenue, Ellesmere Road, New Military Trail, Morningside Avenue, and Sheppard Avenue East, terminating at the under-construction Line 2 Station at McCowan Road. The alignment also includes a branch off Sheppard Avenue East along Neilson Road to the Malvern Town Centre at Tapscott Road. Non-revenue trackage to connect with the MSF site at Sheppard Avenue East and Conlins Road is also part of the project. Section 4 of the EPR discusses the existing conditions in more detail.

Existing conditions in the project study area are summarized below:

- **Transportation:** A range of existing transit services (including local buses, dedicated bus lanes and connections to existing higher-order transit (Line 2) and regional GO Transit services, under-construction transit (Line 2 Extension and Line 5), and planned transit infrastructure (Sheppard Line 4 Extension). The active transportation network consists of sidewalks with limited cycling infrastructure. The typical road right-of-way in the study area is mostly 36 m with a posted speed limit of 50 km/h. The road configuration varies along the study area but ranges between 4 lanes to 6 lanes in, with turning lanes at intersections.
- **Infrastructure:** A range of existing utilities, including multiple medium-to-large sanitary sewers, transmission watermains and crossing storm sewers that manage stormwater runoff into one of two TRCA-regulated watersheds: the highly urbanized Highland Creek watershed and the Rouge River watershed.
- **Socio-Economic Environment:** A range of different land uses including residential neighbourhoods, apartments, mixed use, institutional, and employment uses. Compared to City-wide averages, the neighbourhoods adjacent to the EELRT are two to three times denser, have a higher prevalence of low-income households and have high cultural diversity, with up to 80% of the study area population being visible minorities.
- **Natural Environment:** The study area spans two physiographic regions: the South Slope and the Lake Iroquois Plain. The bedrock geology consists of the upper Ordovician Georgian Bay Formation, primarily composed of shale. Aquatic habitats investigated include the Highland Creek and Rouge River watersheds, with detailed observations on fish species and habitat conditions at watercourse road crossings. Vegetation communities identified in the area are diverse, influenced by human disturbance, and cover various terrestrial and wetland ecosystems. The study area's natural environment is highly urbanized and contains Areas of Natural and Scientific Interest (ANSI), Provincially Significant Wetlands and Environmentally Sensitive Areas (ESA) (Morningside Park ESA and the Highland Forest ESA), which support high quality forest and wetland habitats and several locally rare plant species. Wildlife in the area is diverse, with 41 species recorded, including birds and mammals, and some species at risk identified.
- **Cultural Environment:** A review of federal, provincial, and municipal registers, inventories, and databases and background information shows that there are two (2) known and five (5) potential built heritage resources (BHRs) as well as one (1) known and three (3) potential cultural heritage landscapes (CHLs) in the study area. Fieldwork was completed during the TRPAP to support the development of Cultural Heritage Evaluation Reports and confirm cultural significance for resources identified as having potential value. The assessment confirmed that no Cultural Heritage Value or Interest (CHVI) has been found for resources identified for further evaluation. The Stage 1 Archaeological Assessment (AA) for the study area determined that 18 previously registered archaeological sites are located within one km of the study area, two of which are within approximately 50 metres and do not exhibit further cultural heritage value or interest. The property inspection identified 7 properties that exhibit archaeological potential (beyond areas that have been previously assessed or are disturbed) and will require a Stage 2 AA.
- **Emissions:** Air quality representative of urban environment with limited air quality parameters exceeding air quality standards. Under existing conditions, ambient noise levels in the study area are generally higher than the MECP/TTC Protocol guideline minimums of 55 dBA (daytime) and 50 dBA (nighttime), reflective of an urban environment.

Impacts, Mitigation and Monitoring

Based on the existing conditions and a review of potential impacts and mitigation, the project is expected to have a net positive impact on the study area. Potential impacts are mitigatable, and appropriate measures have been identified to minimize negative effects during construction and operations phases. The project's impacts, mitigation measures, and monitoring activities are summarized below and are detailed in Section 5 of the EPR.

	Impact	Mitigation and Monitoring
Active Transportation	• Significant improvements to active transportation along the entirety of the LRT corridor with wider sidewalks, dedicated cycling facilities, multi-use paths and protected intersections, where feasible.	• None
Transit	• Frequent and reliable LRT service complemented by a realigned bus network and connections to existing and planned higher-order transit. • Improved transit connectivity to businesses, jobs and residences, benefitting underserved communities and supporting future growth and complete communities.	• To mitigate impacts of potential permanent rerouting of existing bus routes, it is recommended to divert local bus routes to intersect and feed the LRT in locations where passengers can transfer conveniently. • Maintain local bus service along segments with wider LRT stop spacing and developing a complementary transit network to make taking transit easier.
Traffic	• Reduction of vehicle lanes to accommodate transit. • Increased travel times for people driving due to LRT implementation. Increases will be specific to each corridor, will need to incorporate mode shift, and will be confirmed during future phases of design. • Localized impacts such as road realignments or extensions, notably at Beath Street, which will be extended beyond its current terminus at Morningside Avenue west to Rodda Boulevard. • Potential for traffic to impact adjacent neighbourhoods in areas where certain intersections are more difficult to access due to the centre-running LRT. • Changes to roadway configuration to improve safety aligned with current City of Toronto guidelines.	• Increase multi-modal capacity, thereby increasing the overall capacity of the EELRT corridor, to counter reduction in vehicle lanes. • Coordinate traffic signals to minimize delays for drivers. • Provide adequate signage and advance notice regarding stop relocation and route rerouting. • Monitor live conditions and adjust service to maintain acceptable performance. • Monitor traffic volumes and adjust signal timings as necessary.
Property Impacts	• According to the functional (10%) design, approximately 380 properties would be impacted to fit all elements of the LRT and public realm improvements. It should be noted that the actual property requirements can only be determined through the completion of detailed design.	• Optimize the project's design in future phases to minimize property acquisition requirements. • Ensure that individual property owners' rights are respected and protected, and that fair compensation is provided within the framework of the Expropriations Act for any property interest acquired or affected by civic projects. • Emphasize negotiation and the achievement of a mutually satisfactory agreement between the City and the owners. • Engage with and continuously inform communities, residents, business owners, and institutions who may be directly impacted by the project.
Construction Impacts	• Temporary rerouting of transit services, auto traffic, cycling routes, and sidewalks around construction zones. • Dust from construction activities. • Potential impacts to built heritage resources due to construction vibration. • Access challenges to businesses and services along the project corridor. • Temporary impacts to public realm elements, such as sidewalks and trees. • Some hydraulic structure enhancements required to support increased roadway width and meet current design standards. • Bridge widenings required at two locations. • Utility relocations required as a result of the LRT centre median guideway.	• Retain RapidTO bus lanes during construction, where possible. • Coordinate road closures and stage construction activities in the same area. • Develop a Traffic and Transit Management Plan as part of construction requirements to provide alternatives to RapidTO, if impacted. • Develop an Emergency Response Plan during the construction phase. • Prepare a Dust Management Plan to identify ways to minimize dust and emission during construction. • Undertake a baseline vibration assessment for potentially impacted properties during detailed design. • Develop an Erosion and Sediment Control Plan for site-specific erosion and sedimentation control measures. • Develop a Construction Staging and Mitigation Plan.
Socio-Economic Environment	• The EELRT will bring higher-order transit within walking distance of an estimated additional 81,000 people in 2041, providing increased access to historically underserved communities throughout Scarborough. • Impact to small businesses during construction. • Potential for gentrification and change in land use and urban fabric due to development.	• Integrate EELRT impacts and implementation into ongoing planning studies (Avenue Study, EHON) to achieve city-building objectives and support strong neighbourhoods.

	Impact	Mitigation
Natural Environment	• Some displacement and disturbance of wildlife and wildlife habitats at the MSF site. • Fish habitats and woodlots impacted at Highland Creek and other watercourse crossings. • Limited overall impact to vegetation communities, with some removals of vegetation and wetland communities. • No impact to aquatic species at risk. • Potential impact to two bird species at-risk.	• Complete a wildlife sweep prior to construction. • Ensure the project is designed to minimize impact on the natural environment. • Develop an Invasive Species Management Plan. • Conduct a Tree Inventory Study to manage tree resources and ensure preservation of forests, parks, and other green spaces. • Develop a Restoration and Enhancement Plan, which would include details about tree replanting.
Cultural Environment	• Impacts to three built heritage resources and one cultural heritage resource. Impacts include property encroachments, the potential for structural removals, and indirect impacts during construction (see the Construction Impacts section later in this document). • No impact to Provincial Heritage Properties or Provincial Heritage Properties of Provincial Interest. • Archaeological potential was identified at several sites along Kingston Road, Ellesmere Road, Sheppard Avenue East, and Neilson Road.	• Completed a Cultural Heritage Evaluation as part of the TRPAP to determine if properties have heritage value. • For properties with known cultural heritage value, complete a Heritage Impact Assessment during detailed design. • Complete a Stage 2 Archaeological Assessment for these seven sites. • Coordinate with interested Indigenous Communities and conduct a Stage 2 Archaeological Assessment on site that require it. Should the proposed work extend beyond the current study area, conduct further archaeological assessments to determine the archaeological potential of the surrounding lands.
Air Quality	• Decrease in vehicle-related emissions by along the route, including an 18% decrease in GHG emissions, resulting in improved local air quality. • The MSF and LRT stops will have negligible effects on air quality.	• None required.
Noise and Vibration	• Maximum ground-borne vibration levels from operations are predicted to meet acceptable criteria. • If left unmitigated, noise levels may exceed acceptable criteria in areas surrounding Military Trail, UTSC, Neilson Road, and the MSF.	• Employ track and wheel treatments along with property line noise barriers to mitigate sound levels to meet applicable guidelines at all noise sensitive areas. • Implement robust complaint response procedures to ensure timely response and corrective actions.
Climate Change and Sustainability	• EELRT is a low-carbon sustainable transportation system that also encourages active travel as well. • The EELRT avoids disruption to natural spaces by primarily operating within the established public ROW.	• None required.

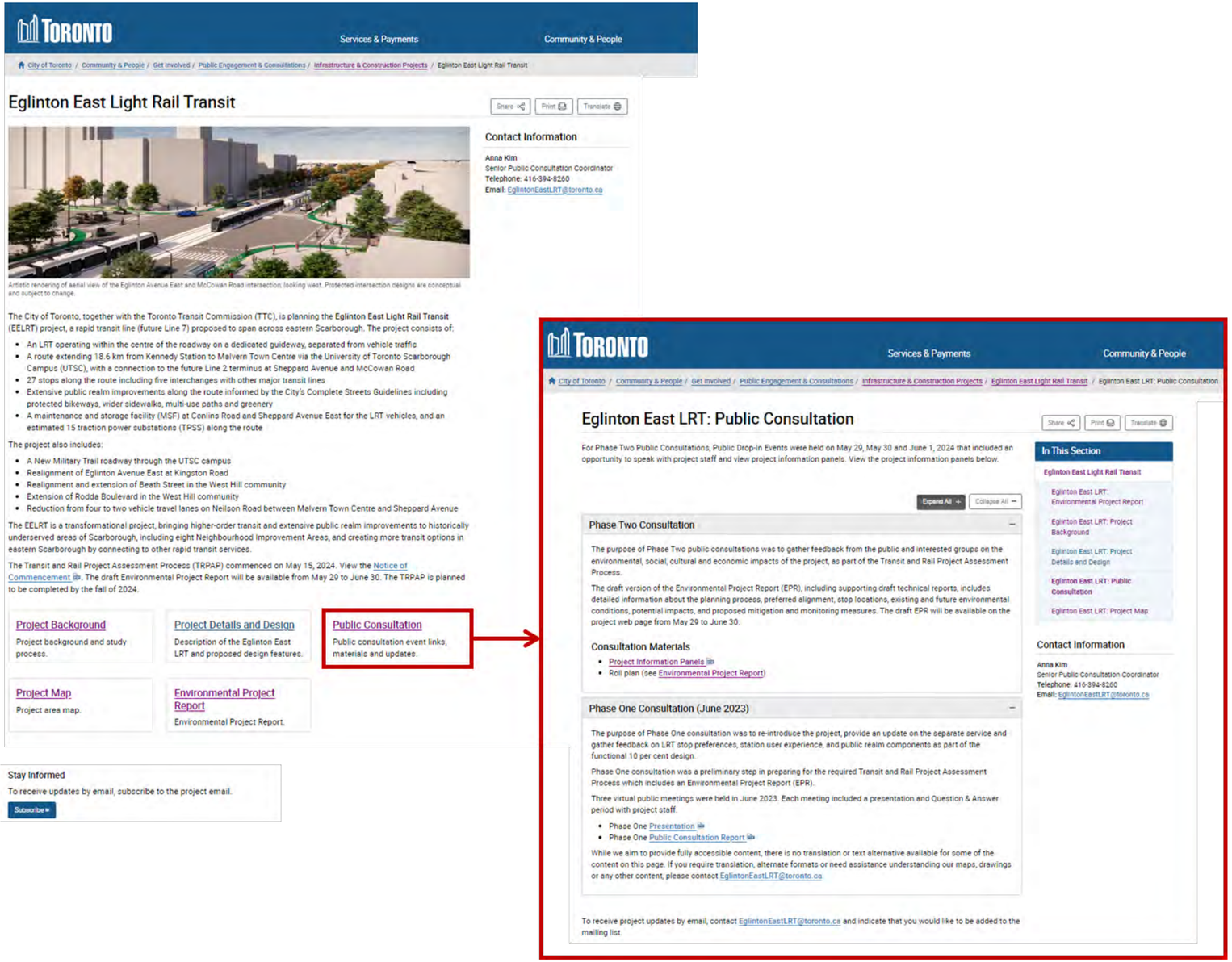
Consultation and Engagement

The TRPAP engagement period began following the issuance of the Notice of Commencement on May 15, 2024 and completed as of the filing of the Notice of Completion on September 10, 2024. To date, the project engagement efforts have included:

- Public Open Houses (both in-person and virtual);
- Regular Technical Advisory Committee (TAC) meetings;
- Stakeholder Advisory Group (SAG) and Interest Group meetings;
- Meetings with and circulation of project materials to key stakeholders , including University of Toronto Scarborough Campus (UTSC), Metrolinx, Ontario Ministry of Transportation (MTO);
- Meetings and correspondence with various regulatory agencies including Ministry of Environment, Conservation and Parks (MECP), Toronto Region Conservation Authority (TRCA), Ministry of Citizenship and Multiculturism, and Credit Valley-Toronto and Region-Central Lake Ontario (CTC) Source Protection Region.
- Meetings with impacted property owners and real estate investment trusts; and
- Consultation with Indigenous Communities.

Project engagement will continue through detailed design and construction. Additionally, a project website has been maintained by the City of Toronto.

A more detailed breakdown of the consultation activities (during Pre-Planning and TRPAP phases) can be found in Section 6 of the EPR. The consultation record is in **Appendix L.**



Next Steps

Before construction and operation of the project, the City of Toronto and TTC, as the proponents, have made commitments on completing future actions related to transportation, infrastructure, utilities design, socio-economic, natural, and cultural environments, emissions, climate change and sustainability, property impacts, consultation, implementation, and operations and management. These future commitments are outlined in Section 8 of the EPR. Engagement with external stakeholders, regulatory agencies, the public, property owners and Indigenous Communities will continue as the project advances.

The project will be implemented in accordance with applicable municipal, provincial, and federal laws and regulations. The City of Toronto and TTC will obtain necessary permits and approvals for the construction and operation of the Project.

In advance of commencing construction activities, and during construction, mitigation measures will be implemented. Monitoring activities will continue throughout construction and upon completion of construction, where required. Traffic, transit, emergency response, construction and environmental management plans will be developed to outline protection measures for features located in and around the project footprint in order to minimize disruption and further define the monitoring measures. Mitigation includes coordination amongst project interfaces, especially at Kennedy and Sheppard-McCowan Stations to reduce the negative impacts of construction on surrounding residents and businesses.