

SMARTTRACK STATIONS PROGRAM TECHNICAL UPDATE

The SmartTrack Stations Program consists of five new SmartTrack stations serving various GO Rail lines across the City of Toronto: Finch-Kennedy, East Harbour, King-Liberty, St. Clair-Old Weston and Bloor-Lansdowne (Figure 1).

This attachment provides a description of the location and general arrangement of the five SmartTrack stations, and an evaluation of the function and benefits provided by the stations using principles and criteria established in the City's Rapid Transit Evaluation Framework (RTEF).

Some components of the SmartTrack stations will now be delivered through the Province's Transit-Oriented Development/Transit-Oriented Communities (TOD/TOC) Program, which involves partnerships with adjacent landowners or developers. In these cases, as described below, some design elements of SmartTrack stations will be deferred to future phases, to be constructed by the developer in conjunction with the development.



Figure 1. Map of rapid transit network showing five new SmartTrack Stations.

Rapid Transit Evaluation Framework: Overview

The Rapid Transit Evaluation Framework (RTEF) is an outcome of *Feeling Congested?*, the transportation component of the Official Plan review. The RTEF was developed in 2013 by City Planning staff with extensive input from the public and stakeholders, and has served as the framework used by staff for evaluating the benefits of a wide range of transit studies and projects presented to City Council.

Three policy principles and eight criteria are the foundation of the RTEF. These principles are:

- **Serving People** – how well does the project meet the demand for travel in terms of helping passengers, drivers, goods and services get to where they need to go, and in terms of improving equity or fairness by bringing better transportation services to all parts of the city?
- **Strengthening Places** – how well does the project strengthen and connect neighbourhoods, balance the functions of serving as a travel corridor and a place-building agent, and protect and enhance the quality of the urban environment?
- **Supporting Prosperity** – how well does it support the city’s economic development goals, improve its competitiveness and deliver the greatest ridership/travel volumes at the least cost?

Under these three policy principles, the RTEF includes seven criteria and broad objectives, as defined in Table 1 below. For undertaking an evaluation of a transit network or specific transit projects, the criteria can be broken down into specific measures that can be assessed using available analytical tools and data. Some measures will be common to all transit projects, while others may be relevant only to the goals and objectives of an individual project.

Table 1. Overview of the City's Rapid Transit Evaluation Framework principles, criteria, and objectives.

Principles	Criteria	Objectives
Serving People	Choice	Develop an integrated network that connects different modes to provide for more travel options
	Experience	Capacity to ease crowding / congestion; reduce travel times; make travel more reliable, safe and enjoyable
	Social Equity	Allow everyone good access to work, school and other activities
Strengthening Places	Shaping the City	Use the transportation network as a tool to shape the residential development of the City
	Healthy Neighbourhoods	Changes in the transportation network should strengthen and enhance existing neighbourhoods; promote safe walking and cycling within and between neighbourhoods
	Public Health and Environment	Support and enhance natural areas; encourage people to reduce how far they drive; mitigate negative impacts
Supporting Prosperity	Supports Growth	Investment in public transportation should support economic development: allow workers to get to jobs more easily; allow goods to get to markets more efficiently

SmartTrack Stations: RTEF Evaluation of Function and Benefits

The five new SmartTrack stations are located in diverse urban contexts and will perform a variety of functions within the rapid transit network across the city and the region. Some stations will serve major employment nodes, some stations will serve a significant residential population, and others will primarily accommodate transfers from feeder transit routes.

Serving People

The stations will integrate with the existing and planned transit network, providing a greater choice of route options for transit riders. The five new stations will connect with four existing or planned higher-order transit lines (including subway lines and streetcars in dedicated rights-of-way) as well as nine local transit services. The stations will provide improved access to more than 52 major regional destinations located within 800 metres of transit stations that generate a significant volume of transit trips, including major shopping centres, recreational opportunities, community facilities, and educational institutions.

Forecast ridership varies station-by-station, with some stations attracting a greater number of transit riders than others. In total, the five stations are projected to attract a combined 24,000 boardings and alightings during the average weekday peak hour. Taken together, the five new stations are projected to attract 3,400 new daily riders to Toronto's transit system by 2041 every weekday. Ridership would likely be higher with full fare integration between the TTC and GO Transit.

The five stations will provide users of the transportation system with more than 1.5 million person-minutes of travel time savings each day. This figure comprises both transit riders experiencing improved journey times compared to their existing transit journey, and drivers choosing to switch to transit because of the availability of the new station.

From a social equity perspective, the five stations provide improved higher-order transit access to two Neighbourhood Improvement Areas, and support approximately 40,000 residents experiencing social and economic inequalities within 800 metres of all stations.

Strengthening Places

All five stations are located in areas of the urban structure where the Official Plan directs residential or non-residential growth. Approximately half the land within 500 metres of the new stations is designated as *Mixed Use Areas* or *Regeneration Areas* in the Official Plan, which support residential and non-residential growth, or as *Institutional Areas* or *Employment Areas*, which support non-residential development. A population of over 113,000 existing residents lives within 800 metres of the five stations, projected to increase 65% by 2041. Some of this growth is already underway, with 45,000 residential units and 2.5 million square metres of non-residential gross floor area currently in the development pipeline.

Due to their locations along existing rail corridors and the surrounding built form context, stations are not generally expected to have significant negative impacts on stable neighbourhoods or parks in their surroundings. Station development is not expected to have negative impacts on the natural and cultural heritage landscape. Any site-specific issues or challenges will be addressed in the detailed design phase. For some stations, such as St. Clair-Old Weston, an area planning study is currently underway to address the changing contexts in the broader areas around the stations.

Supporting Prosperity

Many SmartTrack stations will be located in major existing or future employment areas, with the most significant employment concentrations being located at East Harbour Station. Approximately 103,000 existing jobs are currently located within 800 metres of the five new stations. This figures is projected to increase by 108% by 2041.

The five stations combined are projected to exceed the minimum density targets required by the provincial *Growth Plan for the Greater Golden Horseshoe (2019)* for Major Transit Station Areas around GO stations (at least 150 people and jobs per hectare) and subway stations (at least 200 people and jobs per hectare). Some individual stations will be below this minimum density target, and may require a change in the planning framework in the station area and real estate market conditions to attract such growth. These changes could also be addressed through the upcoming Municipal Comprehensive Review of the Official Plan to address matters of Growth Plan conformity, as described in the recommended work plan report considered by the Planning and Housing Committee and City Council in June 2020 ([Item PH14.4](#)).

Finch-Kennedy Station

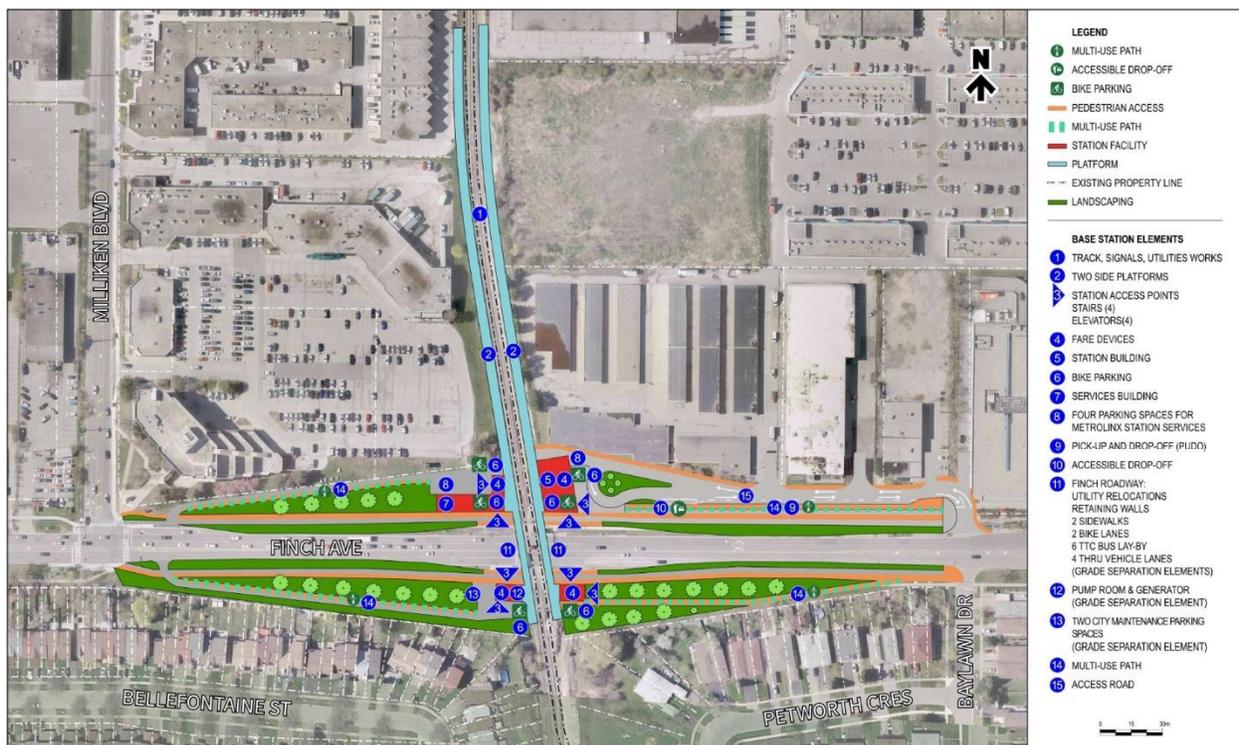


Figure 2. Conceptual plan of Finch-Kennedy Station. Source: Metrolinx (December 2020). Note: Station plan shown above is indicative, and does not represent a final design.

Description

Finch-Kennedy Station will be located along the Stouffville GO rail corridor in Scarborough, between Milliken Station to the north (at Steeles Avenue East) and Agincourt Station to the south (at Sheppard Avenue East). The station will generally be situated on the north side of Finch Avenue East, about halfway between Kennedy Road and Midland Avenue.

A road-rail grade separation will be built, allowing the rail corridor to cross over Finch Avenue East. Four entrances at each corner of the grade separation will provide access to the station's two side platforms, on the west and east sides of the rail corridor. Each entrance will be equipped with stairs, elevators, and bicycle parking facilities connected to multi-use paths accessing future bike lanes on Finch Avenue East.

Vehicular access to Finch-Kennedy Station will be provided via a new access road connecting to Finch Avenue East, opposite Baylawn Drive, about 230 metres east of the rail corridor. Pedestrian pick-up/drop-off will be provided along the south side of this access road. TTC buses will connect with the station at stops in lay-bys on the north and south sides of Finch Avenue East.

There is potential for future development in the area of the station.

Changes to Station Design

Since 2018, the following changes have been made to the Finch-Kennedy Station design:

- The northern entrance road from Silver Star Boulevard, and northern station entrance and tunnel, are deferred to a future phase.
- The accessible pick-up/drop-off has been moved to the southern station access road at Finch Avenue East, on the east side of the station.
- The grade separation has been narrowed, allowing a reduction in the length of the rail bridge span.

Evaluation

Key conclusions that have emerged from the RTEF analysis are summarized below.

Table 2. Highlights of the RTEF evaluation for Finch-Kennedy Station.

RTEF Principle	Evaluation Summary
Serving People	<ul style="list-style-type: none">• Primarily serves transfers from the 39 Finch East bus and express branches, but also some walk-in traffic from the surrounding area• Station would likely benefit greatest from full fare integration with the TTC fare structure (beyond the recent reduction to fares on GO Transit for trips less than 10km) to support trips destined to Downtown• Provides relatively high travel time savings for passengers (>250,000 person-minutes/day)
Strengthening Places	<ul style="list-style-type: none">• Station area has relatively low existing population and population density as it is designated as <i>General Employment Areas</i>• TOD/TOC potential exists with properties immediately east of station• Changes to the planning framework and land use permissions may be required to achieve Growth Plan minimum density target for GO stations or a request for a lower target may be made to the Minister of Municipal Affairs and Housing. These density considerations will be addressed through the upcoming Municipal Comprehensive Review

RTEF Principle	Evaluation Summary
Supporting Prosperity	<ul style="list-style-type: none"> • Excellent compatibility with Official Plan policies for employment growth (more than 60% land designated for employment uses) • Station area has relatively low existing employment and job density

East Harbour Station

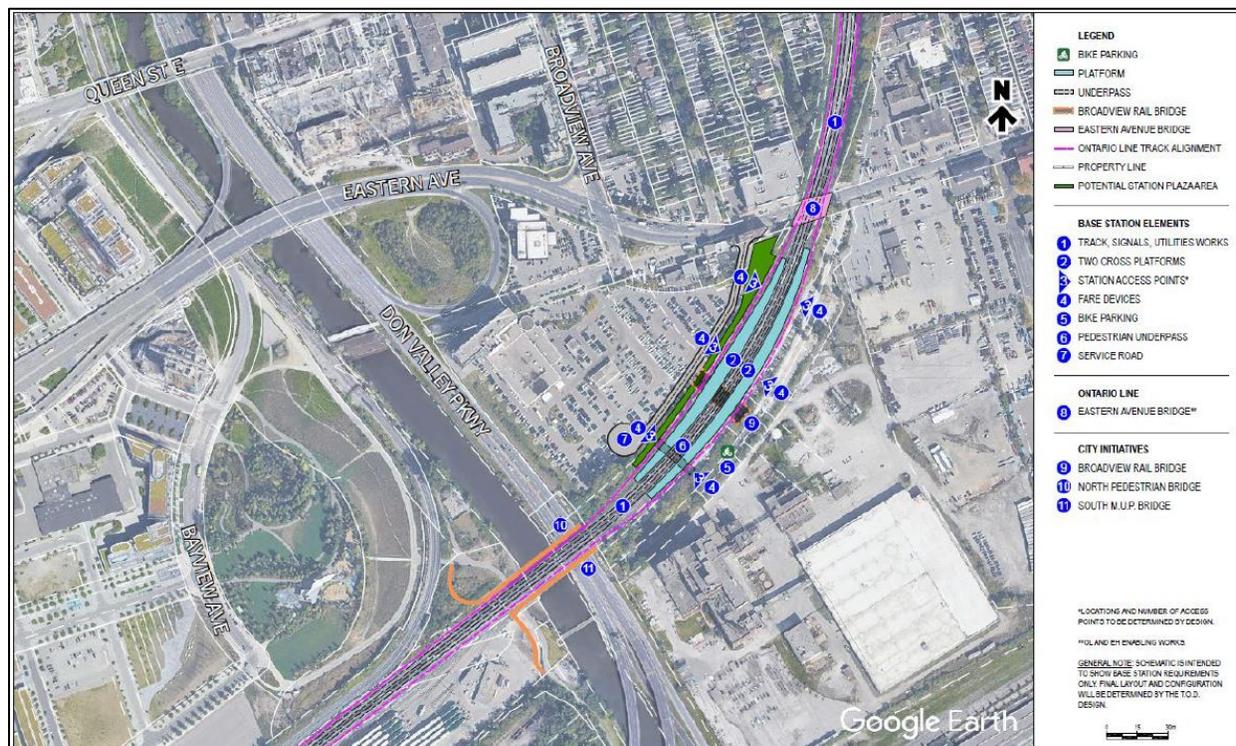


Figure 3. Conceptual plan of East Harbour Station. Source: Metrolinx (May 2020). Note: Station plan shown above is indicative, and does not represent a final design.

Description

East Harbour Station will be located along the Lakeshore East and Stouffville GO rail corridors, between Union Station to the west in Downtown Toronto and Danforth Station (at Main Street) to the east. The station will generally be situated between the Don Valley Parkway and Eastern Avenue, at the crossing location of the future Broadview Avenue extension in the Unilever Precinct. The station will be built as an integrated transit hub with the Ontario Line East Harbour Station.

Pedestrian entrances will be provided at six locations, three on each side of the rail corridor, connecting to passageways under the rail corridor providing stair and elevator access to the platforms. The entrances will generally be located at the Broadview Avenue extension (east side), toward the Don Valley Parkway, and toward Eastern Avenue. Pedestrian bridges on the north and south sides of the rail corridor are proposed to cross the Don Valley Parkway and Don River, providing direct access to the Lower Don Trail on the west side of the river, and by extension to the West Don Lands (Canary District) neighbourhood and future Keating Precinct.

Vehicular access will be provided via a new access road connecting to Eastern Avenue on the north side of the rail corridor. Pedestrian pick-up/drop-off activity will be accommodated within the future street network to be developed in the Unilever Precinct. Connectivity to the future Broadview streetcar, to be built into the Broadview Avenue extension, will be provided via the centre entrances to the station.

East Harbour Station will be developed through the Province's TOD/TOC Program. Under this approach, a prospective Design-Builder will design and deliver the station. Terms of the design and construction are currently being negotiated.

Changes to Station Design

Since 2018, the following changes have been made to the East Harbour Station design:

- The SmartTrack/GO station will be integrated with the Ontario Line station in a "transit hub" with shared station amenities.
- The Broadview underpass and rail bridge will be widened to accommodate the additional tracks for the Ontario Line. Opening of the Broadview Avenue extension through the underpass will be deferred until after the station is complete.
- The pedestrian and cycling bridge crossing the Don River, providing access to Corktown Common and communities to the west, will be integrated into the Ontario Line rail bridge.
- A new access road from Eastern Avenue on the north side of the station will provide access to the station for corridor maintenance and emergency vehicles.

Evaluation

Key conclusions that have emerged from the RTEF evaluation are summarized below.

Table 3. Highlights of the RTEF evaluation for East Harbour Station.

RTEF Principle	Evaluation Summary
Serving People	<ul style="list-style-type: none"> • East Harbour Station provides the highest ridership contribution of all SmartTrack stations, with 13,000 peak hour boardings and alightings projected in 2041 • Station is a key transfer point to the Ontario Line, diverting GO Transit riders from Union Station by providing an alternate route to the Downtown/Financial District • Station is a gateway to the Port Lands, connecting with the planned Broadview streetcar extension • Approximately half the users of the station will transfer to/from other lines, while the other half will enter/exit the transit system from surrounding uses • Station provides the greatest travel time savings for passengers of all stations, representing >1 million person-minutes saved/day
Strengthening Places	<ul style="list-style-type: none"> • Station area has recently adopted Secondary Plan in place that designates the immediate area as <i>General Employment Areas</i>, which anticipates significant employment growth • Strongest projected population growth of all station areas (145% within 800 m) • Projected development will exceed Growth Plan minimum density target of 200 people and jobs per hectare for subway stations
Supporting Prosperity	<ul style="list-style-type: none"> • Strongest projected employment growth of all SmartTrack station catchment areas, approaching 1000% within 500 metres, and 500% within 800 metres • Station is adjacent to the proposed East Harbour office development, with 50,000 proposed jobs • Station area has very good compatibility with Official Plan policies for employment growth, with over 50% of land designated for employment uses

King-Liberty Station

Description

King-Liberty Station will be located along the Kitchener GO rail corridor, between Union Station to the east and the future St. Clair-Old Weston Station to the west. The station will be situated on the north side of King Street West, between Joe Schuster Way and Sudbury Street.

The station will have an entrance on King Street West, immediately west of the rail corridor, providing access to an elevated pedestrian bridge that connects the two island platforms. Stairs and two elevators will be provided at the King Street West entrance structure up to the pedestrian bridge, as well as from the pedestrian bridge down to the platforms. A second entrance, including a second pedestrian-cycling bridge, will be provided between Sudbury Street and Joe Shuster Way. Bicycle parking facilities will also be provided.

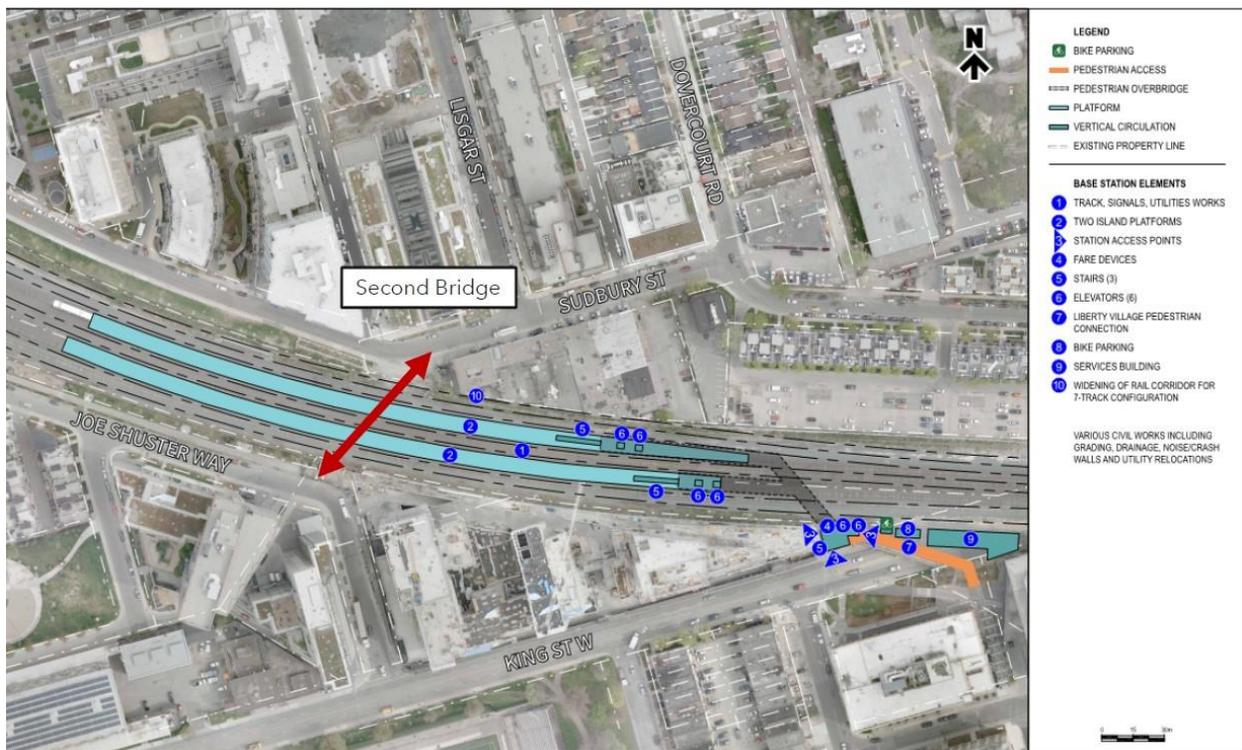


Figure 4. Conceptual plan of King-Liberty Station. Source: Metrolinx (May 2020). Note: Station plan shown above is indicative, and does not represent a final design.

Changes to Station Design

Since 2018, the following changes have been made to the King-Liberty Station design:

- The main station building at Sudbury Street is deferred to a future phase.
- Platforms have been reconfigured to provide better access to the entrance at King Street West.
- Platforms have been changed to island platforms (from side platforms) and will serve four Kitchener Line tracks.

Evaluation

Key conclusions that have emerged from the RTEF evaluation are summarized below.

Table 4. Highlights of the RTEF evaluation for King-Liberty Station.

RTEF Principle	Evaluation Summary
Serving People	<ul style="list-style-type: none"> • King-Liberty Station provides the second-highest ridership contribution of all SmartTrack stations, with 3,200 peak hour boardings and alightings projected in 2041 • Station has a relatively high number of major destinations around the area (e.g., Lamport Stadium, CAMH, Exhibition Place, etc.) • Provides relatively high travel time savings for passengers (>175,000 person-minutes/day) • Best positioned new station to support social equity, with proximity to the South Parkdale Neighbourhood Improvement Area
Strengthening Places	<ul style="list-style-type: none"> • Station area has a relatively high existing population, with approximately 30,000 people living within an 800 metre radius • Planning framework around station supports population growth, with approximately 25% of land designated for residential land uses • Station area already achieves Growth Plan minimum density target of 150 people and jobs per hectare for GO stations • Although the station has the greatest number of designated and listed heritage properties around the station area, none are impacted by current phase of development
Supporting Prosperity	<ul style="list-style-type: none"> • Station supports significant existing employment, with more than 20,000 existing jobs within 800 metre radius • Second-highest projected employment growth of all stations, with a 115% increase in jobs within a 500 metre radius projected to 2041 • Excellent compatibility with Official Plan policies for employment growth, with more than 60% land designated for employment uses

St. Clair-Old Weston Station

Description

St. Clair-Old Weston Station will be located along the Kitchener GO rail corridor, between the future King-Liberty Station to the east and the under-construction Mount Dennis Station, part of the Eglinton Crosstown Light Rail Transit project, to the west. The station will be situated on the north side of St. Clair Avenue West, about halfway between Weston Road and Old Weston Road.

Two station entrance buildings will be provided along Union Street on the east side of the rail corridor, which provide pedestrian access to two side platforms via a tunnel under the rail corridor. One stair and elevator connection will be provided from each tunnel to each platform. Union Street can be accessed from St. Clair Avenue West via Old Weston Road and Townsley Street. Additional pedestrian access will be provided directly to the south end of the southbound platform from St. Clair Avenue West, and to the north end of the southbound platform from Weston Road via a pedestrian path at the end of Gunn's Road.

Vehicular access will be accommodated through the provision of a curbside pick-up/drop-off zone along the west side of Union Street. A bus loop off Union Street between the two station buildings will accommodate TTC bus service and Wheel-Trans pick-up/drop-off.

The development of St. Clair-Old Weston Station is being coordinated with the St. Clair Avenue West Area Transportation Master Plan (TMP). The station project is anticipated to include the St. Clair Avenue West widening and Gunn's Road extension recommended in the TMP.

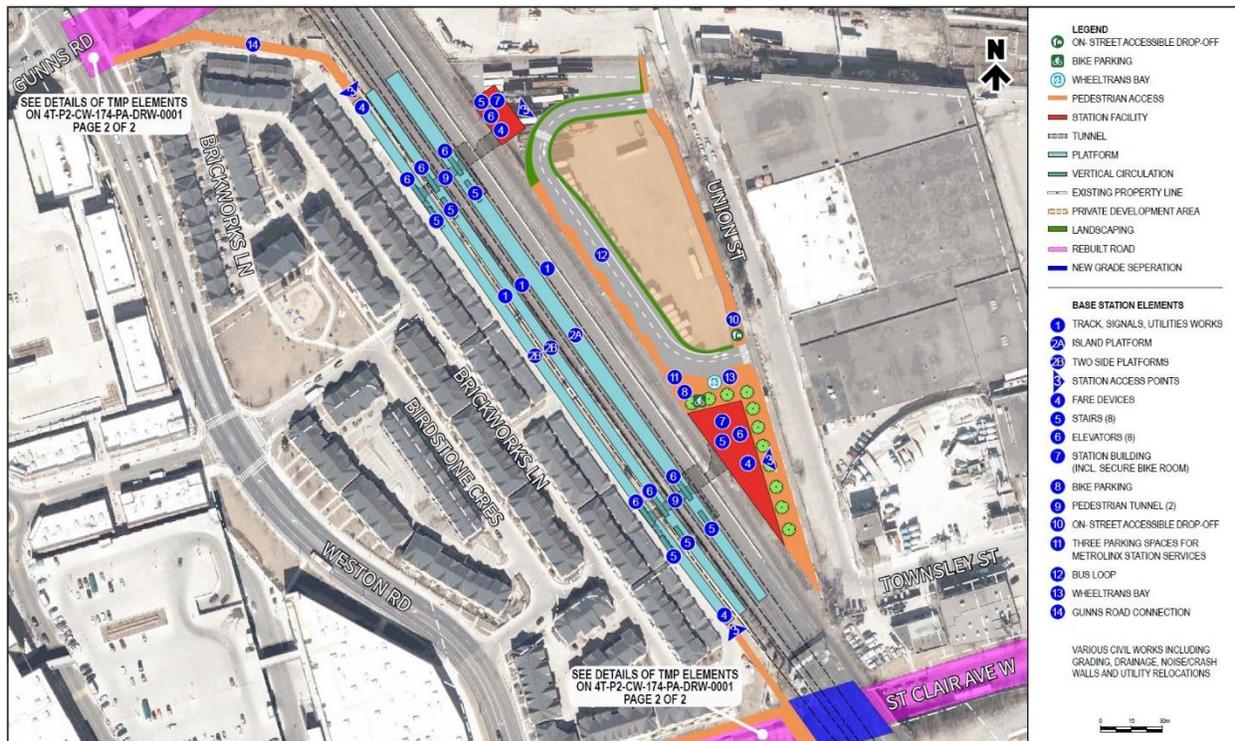


Figure 5. Conceptual plan of St. Clair-Old Weston Station. Source: Metrolinx (December 2020). Note: Station plan shown above is indicative, and does not represent a final design.

Changes to Station Design

Since 2018, the following change has been made to the St. Clair-Old Weston Station design:

- Additional space for the CP Rail tracks has been added on the east side of the rail corridor, necessitating a redesign of the bridge accommodating the future Davenport Road extension.

Evaluation

Key conclusions that have emerged from the RTEF evaluation are summarized below.

Table 5. Highlights of the RTEF evaluation for St. Clair-Old Weston Station.

RTEF Principle	Evaluation Summary
Serving People	<ul style="list-style-type: none"> • St. Clair-Old Weston Station connects with the greatest number of local transit routes of all stations, improving potential reach of transit into the community • Station supports social equity, with the Weston-Pellam Park Neighbourhood Improvement Area being located within 800 metres • Lowest ridership contribution of all SmartTrack stations, with 300 boardings and alightings forecast during the peak hour in 2041
Strengthening Places	<ul style="list-style-type: none"> • Station area currently has relatively low population and population density • Station area is projected to be close to achieving the Growth Plan minimum density target of 150 people and jobs per hectare for GO stations • An area planning study is currently underway to update planning framework intended to support intensification of both population and job growth around station
Supporting Prosperity	<ul style="list-style-type: none"> • Station area currently has relatively low existing employment and job density

RTEF Principle	Evaluation Summary
	<ul style="list-style-type: none"> Relative to other station areas, St. Clair-Old Weston Station is currently at the lower end for the amount of land designated to support employment growth Excellent TOD/TOC potential within 800 metres of the station, particularly for non-residential development

Bloor-Lansdowne Station

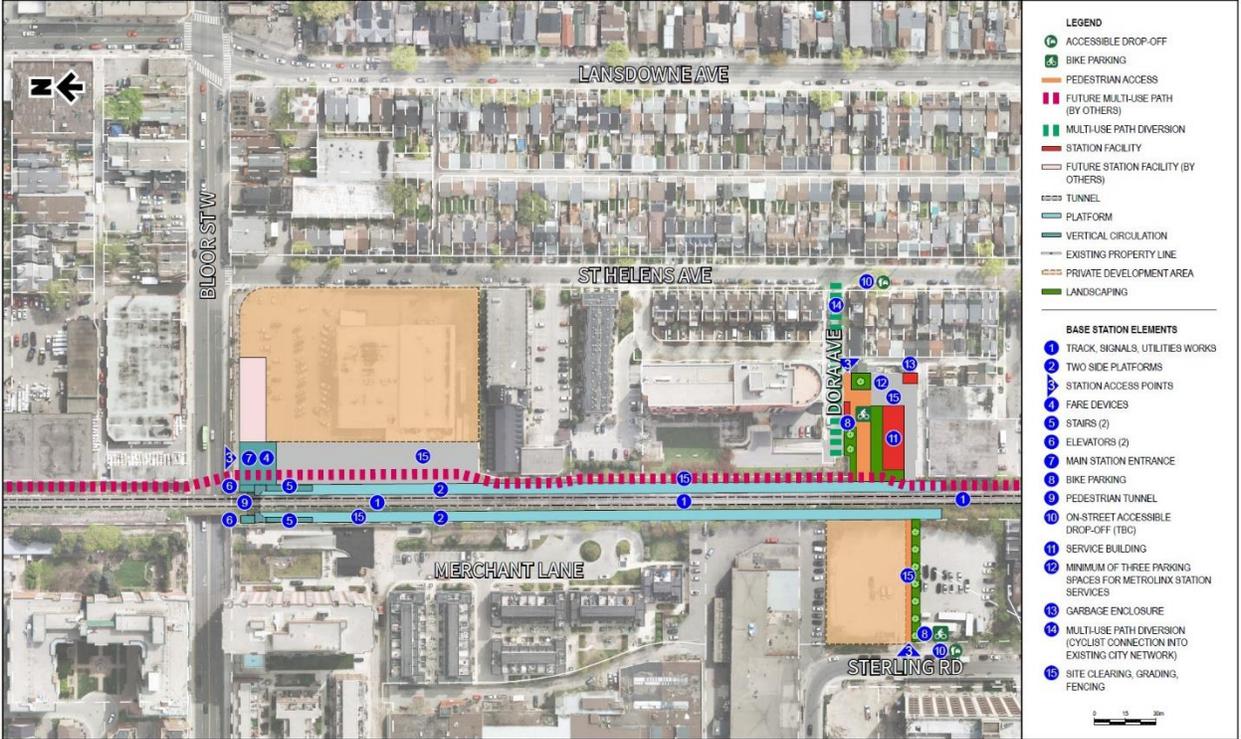


Figure 6. Conceptual plan of Bloor-Lansdowne Station. Source: Metrolinx (December 2020). Note: Station plan shown above is indicative, and does not represent a final design.

Description

Bloor-Lansdowne Station will be located along the Barrie GO rail corridor, between the future Spadina-Front GO Station to the south and the under-construction Caledonia GO Station to the north. The station will be situated on the south side of Bloor Street West, west of Lansdowne Avenue.

The station will have a side platform configuration, with southbound platforms on the west side of the rail corridor and northbound platforms on the east side. An entrance building will be constructed on the east side of the rail corridor at Bloor Street West, providing pedestrian access to the station. Stairs and elevators at the entrance will provide access to a passageway under the rail corridor, also connecting to the north end of the platforms above with additional stairs and elevators. The station will be delivered through Metrolinx's TOD/TOC Program. An additional pedestrian access to the south end of the southbound platform is provided from Sterling Road; in the future, this could be connected to the south end of the northbound platform via a second tunnel.

Changes to Station Design

Since 2018, the following changes have been made to the Bloor-Lansdowne Station design:

- The main station building will be integrated into the Bloor Street grade separation.

- The southern access tunnel, stairs and elevators are deferred to a future phase.
- The pedestrian bridge over Bloor Street West is deferred to a future phase.
- The multi-use path east of and parallel to the rail corridor is deferred to a future phase.

Evaluation

Key conclusions that have emerged from the RTEF evaluation are summarized below.

Table 6. Highlights of the RTEF evaluation for Bloor-Lansdowne Station.

RTEF Principle	Evaluation Summary
Serving People	<ul style="list-style-type: none"> • Bloor-Lansdowne Station provides connectivity with Line 2, but currently would require an exterior walking route to make the transfer • Station is projected to attract moderate ridership, with about 2,900 peak hour boardings and alightings forecast in 2041 • The vast majority of ridership at this station is projected to come from transferring passengers, with a low volume of walk-in trade
Strengthening Places	<ul style="list-style-type: none"> • Station area has a relatively high existing population, with more than 20,000 people living within an 800 metre radius • Typical amount of land designated for residential growth among all station areas • Strength in residential growth is evident as the station area has the second-highest number of residential units in the development pipeline • Excellent TOD/TOC potential and opportunities in the station area, particularly for residential development • Station area is projected to be close to achieving the Growth Plan minimum density target of 150 people and jobs per hectare for GO stations
Supporting Prosperity	<ul style="list-style-type: none"> • Relatively low existing employment and job density within 800 metres of station • Lowest percentage of land designated for employment uses of all station areas • Low employment growth projected around station area to 2041

Methodology

Staff have relied on a number of data sources and analytical methods to undertake the analysis. Data sources used have included the following:

- Census of Canada (2016)
- City of Toronto Employment Survey (2019)
- SmartTrack Population and Employment Forecasts (2015)
- City of Toronto Land Use Information System (LUIS II) (2020)
- TTC Service Summary (January 2020)
- City of Toronto Official Plan (2019 consolidation)
- SDFA Neighbourhood Equity Index (2014)
- Guidance on SmartTrack/GO Station Area Planning, SvN (2017)

Environmental scans and professional opinions of prevailing and future conditions evaluated by subject matter experts were used to assess some of the more qualitative evaluation criteria.

Metrics involving 500 m and 800 m radii from stations were estimated with the application of GIS operations on source data originally aggregated to different levels of geographic granularity, such as point data for the Employment Survey, dissemination blocks for the Census dissemination blocks, and traffic zones for the population and employment projections, etc.

Ridership and accessibility modelling was undertaken with the City's GTAModel v4, applying 2041 horizon year assumptions for population and employment, and the most current assumptions for the development of the future rapid transit network in the City.