

Ontario Line Downtown Stations - Temporary Road Closures and Community Impacts

Date: November 23, 2021

To: Executive Committee

From: General Manager, Transportation Services

Wards: Ward 10 - Spadina-Fort York and Ward 13 - Toronto Centre

SUMMARY

The Province of Ontario through its Agency Metrolinx will deliver the Ontario Line, a 15.6 kilometre long, 15-stop fully-automated rapid transit system between Ontario Science Centre and Exhibition Place. When completed, this new transit line will provide relief to the TTC Line 1 Yonge-University and other busy transit routes across the City.

The project is currently in P3 (Project Co.) procurement stage for the south segment of the Line, which extends from Don River to Exhibition Place. Construction of the tunnel and stations is expected to start in the summer of 2022 and be complete in about 7 years. Metrolinx has completed constructability assessments for the King-Bathurst, Queen-Spadina, Osgoode, Queen, Moss Park and Corktown stations and provided details of construction plans, long-term road closures, impacts and mitigation measures. City staff have worked closely with Metrolinx staff to review the construction plans and strategies to seek to minimize construction impacts on the community and road users.

This report provides an overview of early works and station construction related temporary road closures at each of the six downtown stations and its impacts on the community and road users including pedestrians, cyclists and transit users. The temporary road closures discussed in this report are the maximum permitted for the proponents in the procurement stage. The Project Co. procurement process incentivizes the proponents to reduce the number and duration of road closures. Therefore, it is expected that the successful proponent design would require fewer temporary road closures during construction than discussed in this report, resulting in reduced impacts on the community and road users.

Additionally, the report discusses infrastructure improvements on York Street, including installation of a new streetcar track (between Queen Street West and Adelaide Street West) and a new cycle track (between Richmond Street West and King Street West). Metrolinx will install the new infrastructure to accommodate the TTC Queen 501 streetcar detour during the full closure of Queen Street required for the construction of

the Ontario Line Queen Station. Finally, the report provides an overview of Metrolinx's outreach to the local community, including BIAs, community, and elected officials and their communication strategy during the project's construction.

The objective of the report is to seek City Council approval for the following:

- Implementation of long term temporary road closures and associated traffic regulation amendments required for the station construction,
- Implementation of new infrastructure improvements on York Street, including a new streetcar track and a cycle track, and
- Authority to negotiate and enter into an agreement with Metrolinx and TTC for the delivery of the new infrastructure works on York Street, between Queen Street West and King Street West.

RECOMMENDATIONS

The General Manager, Transportation Services recommends that:

1. City Council approve the temporary road closures for the Ontario Line King-Bathurst Station, as per the following details:

- a. Temporary closure of the east sidewalk to pedestrian traffic and a portion of the northbound curb lane to vehicular traffic on Bathurst Street, between King Street West and Stewart Street, from October 1, 2022 to November 30, 2029.
- b. Temporary closure of the south sidewalk to pedestrian traffic and eastbound curb lane to vehicular traffic on King Street West, between Bathurst Street and a point 37 metres east, from October 1, 2022 to November 30, 2029.
- c. Temporary closure of the east sidewalk to pedestrian traffic and northbound curb lane to vehicular traffic on Bathurst Street, between King Street West and a point 38 metres north, from October 1, 2022 to November 30, 2029.
- d. Temporary closure of the north sidewalk to pedestrian traffic and westbound curb lane to vehicular traffic on King Street West, between Bathurst Street and a point 45 metres east, from October 1, 2022 to November 30, 2029.
- e. Temporary closure of the north sidewalk to pedestrian traffic on Stewart Street, between Bathurst Street and a point 32 metre east, from October 1, 2022 to November 30, 2029.
- f. Temporary closure of a portion of the eastbound curb lane to vehicular traffic on Stewart Street, between Bathurst Street and a point 36 metres east, from October 1, 2022 to November 30, 2029.

2. City Council direct the General Manager, Transportation Services, to require the provision of temporary pedestrian walkways as a condition of permit, at the Ontario Line King-Bathurst Station, as per the following details:

a. Provide a temporary 1.8 metres wide pedestrian walkway within the closed portion of the northbound curb lane on Bathurst Street, between King Street West and Stewart Street, from October 1, 2022 to November 30, 2029.

b. Provide a temporary 2.1 metres wide pedestrian walkway within the closed portion of the eastbound curb lane on King Street West, between Bathurst Street and a point 37 metres east, from October 1, 2022 to November 30, 2029.

c. Provide a temporary 1.8 metres wide pedestrian walkway within the closed portion of the northbound curb lane on Bathurst Street, between King Street West and a point 38 metres north, from October 1, 2022 to November 30, 2029.

d. Provide a temporary 2.1 metres wide pedestrian walkway within the closed portion of the westbound curb lane on King Street West, between Bathurst Street and a point 45 metres east, from October 1, 2022 to November 30, 2029.

e. Provide a temporary 1.8 metres wide pedestrian walkway within the closed portion of the eastbound curb lane on Stewart Street, between Bathurst Street and a point 36 metres east, from October 1, 2022 to November 30, 2029.

3. City Council approve the traffic regulation amendments associated with the Ontario Line King-Bathurst Station and authorize the requisite associated amendment to City of Toronto Municipal Code Chapters 910, Parking Machines and Meters, Chapter 925, Permit Parking and Chapter 950, Traffic and Parking, as listed in Attachment B of the report (November 23, 2021) from the General Manager, Transportation Services.

4. City Council direct that King Street, Bathurst Street and Stewart Street be returned to its pre-construction traffic and parking regulations when the Ontario Line project is complete.

5. City Council approve the temporary road closures for the Ontario Line Queen-Spadina Station, as per the following details:

a. Temporary closure of the south sidewalk to pedestrian traffic on Queen Street West, between Spadina Avenue and a point 53 metres west, from October 1, 2022 to November 30, 2029.

b. Temporary closure of the eastbound curb lane to vehicular traffic on Queen Street West, between Spadina Avenue and a point 83 metres west, from October 1, 2022 to November 30, 2029.

c. Temporary closure of the east sidewalk to pedestrian traffic and curbside parking lane to vehicular traffic on Spadina Avenue, between Queen Street West and Bulwer Street, from October 1, 2022 to November 30, 2029.

6. City Council direct the General Manager, Transportation Services, to require the provision of temporary pedestrian walkways as a condition of permit at the Ontario Line Queen-Spadina Station, as per the following details:

a. Provide a temporary 2.1 metres wide pedestrian walkway within the closed portion of the eastbound curb lane on Queen Street West, between Spadina Avenue and a point 53 metres west, from October 1, 2022 to November 30, 2029.

b. Provide a temporary 2.1 metres wide pedestrian walkway within the closed portion of the curbside parking lane on the east side of Spadina Avenue, between Queen Street West and Bulwer Street from October 1, 2022 to November 30, 2029.

7. City Council approve the traffic regulation amendments associated with the Ontario Line Queen-Spadina Station and authorize the requisite associated amendment to City of Toronto Municipal Code Chapter 910, Parking Machines and Meters, and Chapter 950, Traffic and Parking, as listed in Attachment B of the report (November 23, 2021) from the General Manager, Transportation Services.

8. City Council direct that Queen Street and Spadina Avenue be returned to its pre-construction traffic and parking regulations when construction of the Ontario Line project is complete.

9. City Council approve the temporary lane closures for the Ontario Line Osgoode Station, as per the following details:

a. Temporary closure of the east sidewalk to pedestrian traffic on University Avenue, between Queen Street West and a point 110 metres north, from October 1, 2022 to November 30, 2029.

b. Temporary closure of the northbound bike lane to cyclists on University Avenue, between Queen Street West and a point 122 metres north, from October 1, 2022 to November 30, 2029.

c. Temporary closure of the northbound auxiliary lane to vehicular traffic on University Avenue, between Queen Street West and a point 102 metres north, from October 1, 2022 to November 30, 2029.

d. Temporary closure of the southbound innermost median lane to vehicular traffic on University Avenue, between a point 17 metres north of Queen Street West and a point 63 metres further north, from October 1, 2022 to November 30, 2029.

e. Temporary closure of the west sidewalk to pedestrian traffic on Simcoe Street, between Queen Street West and the public laneway south of Queen Street West, from October 1, 2022 to November 30, 2029.

f. Temporary closure of an 8.4 metre wide portion of the southbound curb lane to vehicular traffic on the west side of Simcoe Street, between Queen Street and Richmond Street, from October 1, 2022 to November 30, 2029.

10. City direct the General Manager, Transportation Services to require the provision of temporary pedestrian walkways and bike lanes as a condition of permit at the Ontario Line Osgoode Station, as per the following details:

a. Provide a temporary 2.1 metres wide pedestrian walkway within the closed portion of the northbound bike lane on University Avenue, between Queen Street West and a point 110 metres north, from October 1, 2022 to November 30, 2029.

b. Provide a temporary 2.0 metres wide northbound bike lane in the realigned northbound lanes on the east side of University Avenue, Queen Street West and a point 122 metres north, from October 1, 2022 to November 30, 2029.

c. Provide a temporary 2.1 metres wide pedestrian walkway on the east side of Simcoe Street, between Queen Street West and Richmond Street, from October 1, 2022 to November 30, 2029.

d. Provide a 1.5 metres wide bike lane on the east side of Simcoe Street, between Queen Street West and Richmond Street West, from October 1, 2022 to November 30, 2029.

11. City Council approve the traffic regulation amendments associated with the Ontario Line Osgoode Station and authorize the requisite associated amendment to City of Toronto Municipal Code Chapter 910, Parking Machines and Meters, and Chapter 950, Traffic and Parking, as listed in Attachment B of the report (November 23, 2021) from the General Manager, Transportation Services.

12. City Council direct that University Avenue and Simcoe Street be returned to its pre-construction traffic and parking regulations when construction of the Ontario Line project is complete.

13. City Council approve the temporary road closures for the Ontario Line Queen Station, as per the following details:

a. Temporary full road closure to vehicular traffic on Queen Street West, between Bay Street and Yonge Street, and on Queen Street East, between Yonge Street and Victoria Street, from May 1, 2023 to November 30, 2027.

b. Temporary closure of a portion of the south sidewalk to pedestrian traffic on Queen Street East, between Victoria Street and a point 20 metres west, from May 1, 2023 to November 30, 2027.

c. Temporary full road closure to vehicular traffic on James Street, between Queen Street West and Albert Street, from May 1, 2023 to November 30, 2027.

d. Temporary closure of a portion of the east sidewalk to pedestrian traffic on James Street, between Queen Street West and a point 43 metres north, from November 1, 2025 to November 30, 2027.

e. Temporary closure of the southbound curb lane to vehicular traffic on Victoria Street, between a point 41 metres north of Queen Street East and a point 19 metres south of Queen Street East, from May 1, 2023 to November 30, 2027.

14. City Council authorize the conversion of Albert Street, between Bay Street and James Street, to a two-way traffic operation and authorize the associated amendments to City of Toronto Municipal Code Chapter 910, Parking Machines and Meters, Chapter 903, Parking for Persons with Disabilities and Chapter 950, Traffic and Parking, as listed in Attachment B of the report (November 23, 2021) from the General Manager, Transportation Services.

15. City Council approve the permanent installation of additional streetcar tracks in the westerly middle lane on York Street, between Queen Street West and Adelaide Street West, to accommodate TTC 501 Queen streetcar detour during the Ontario Line Queen Station construction and provide ongoing streetcar network resilience and authorize the associated amendments to City of Toronto Municipal Code Chapter 910, Parking Machines and Meters, and Chapter 950, Traffic and Parking, as listed in Attachment B of the report (November 23, 2021) from the General Manager, Transportation Services.

16. City Council approve the installation of westerly southbound cycle track in effect at all times on York Street, between Richmond Street West and King Street West and amend Schedule E, Cycle Tracks, to City of Toronto Municipal Code Chapter 886, Footpaths, Pedestrian Ways, Bicycle Paths, Bicycle Lanes and Cycle Tracks.

17. City Council authorize the Deputy City Manager, Infrastructure and Development Services to negotiate and enter into and execute an agreement, including all amendments and renewals and ancillary agreements, with Metrolinx and TTC for the delivery of work on York Street and Adelaide Street for the purposes of facilitating the installation of the TTC 501 streetcar detour tracks as part of the Ontario Line Project, substantially in accordance with terms and conditions set out in this report and on such terms and conditions satisfactory to the Deputy City Manager, Infrastructure and Development, and in a form satisfactory to the City Solicitor.

18. City Council approve the temporary closure of the north sidewalk to pedestrian traffic and westbound curb lane to vehicular traffic on Queen Street East, between Sherbourne Street and George Street, from October 1, 2022 to November 30, 2029 for the purposes of the Ontario Line Moss Park Station construction.

19. City Council direct the General Manager, Transportation Services to require, as a condition of permit, the provision of a 2.1 metre wide temporary pedestrian walkway within the closed portion of the westbound curb lane on Queen Street East, between Sherbourne Street and George Street, from October 1, 2022 to November 30, 2029.

20. City Council approve the traffic regulation amendments associated with the Ontario Line Moss Park Station and authorize the requisite associated amendment to City of Ontario Line Downtown Stations - Temporary Road Closures and Community Impacts

Toronto Municipal Code Chapter 910, Parking Machines and Meters, and Chapter 950, Traffic and Parking, as listed in Attachment B of the report (November 23, 2021) from the General Manager, Transportation Services.

21. City Council direct that Queen Street East be returned to its pre-construction traffic and parking regulations when construction of the Ontario Line project is complete.

22. City Council approve the temporary road closures for the Ontario Line Corktown Station, as per the following details:

a. Temporary closure of the south sidewalk to pedestrian traffic on King Street East, between Berkeley Street and a point 30 metres west of Parliament Street, from September 1, 2022 to November 30, 2029.

b. Temporary closure of the eastbound curb lane to vehicular traffic on King Street East, between Berkeley Street and a point 30 metres west of Parliament Street, from September 1, 2022 to November 30, 2029.

c. Temporary closure of the west sidewalk to pedestrian traffic on Parliament Street, between a point 30 metres south of King Street East and a point 44 metres further south, from September 1, 2022 to November 30, 2029.

d. Temporary closure of the southbound curb lane to vehicular traffic on Parliament Street, between a point 5 metres south of King Street East and a point 5 metres north of Front Street East, from September 1, 2022 to November 30, 2029.

23. City Council direct the General Manager, Transportation Services to require the provision of temporary pedestrian walkways as a condition of permit at the Ontario Line Corktown Station, as per the following details:

a. Provide a temporary 2.1 metre wide pedestrian walkway within the closed portion of the eastbound curb lane on King Street East, between Berkeley Street and a point 64 metres east, from October 1, 2024 to November 30, 2029.

b. Provide a temporary 2.1 metre wide pedestrian walkway within the closed portion of the southbound curb lane on Parliament Street, between a point 5 metres south of King Street East and a point 5 metres north of Front Street East, from September 1, 2022 to November 30, 2029.

24. City Council approve the traffic regulation amendments associated with the Ontario Line Corktown Station and authorize the requisite associated amendment to City of Toronto Municipal Code Chapter 950, Traffic and Parking, as listed in Attachment B of the report (November 23, 2021) from the General Manager, Transportation Services.

25. City Council direct that King Street East and Parliament Street be returned to its pre-construction traffic and parking regulations when construction of the Ontario Line project is complete.

26. City Council direct the General Manager, Transportation Services, to include the following as a condition of the permits for the long term road closures detailed in recommendations 1, 5, 9, 13, , 18 and 22 above:

a. Install public art, including mural artwork, onto every elevation of the hoarding board with adequate spotlighting for nighttime illumination, at their sole cost, to the satisfaction of the City Staff, Ward Councillor and local BIA.

b. Pressure wash the construction site and adjacent sidewalks and roadways weekly, or more frequently as needed to be cleared of any construction debris and ensure safe passage for all road and sidewalk users.

c. Provide appropriate lighting on the existing sidewalks and the proposed pedestrian walkways to ensure safety and visibility of pedestrians at all times.

d. Consult and communicate all construction, parking and road occupancy impacts with local business improvements areas (BIA) and resident associations in advance of any physical road modifications.

e. Install appropriate signage, including converging mirrors, temporary routes and/or safe diversion routes as necessary, to ensure that pedestrians, cyclists and motorists safety is considered at all times.

f. Establish a construction management hub that meets monthly and invite local stakeholders including City Staff, neighbourhood associations, local BIA, and Ward Councillor office.

g. Create a publicly accessible website with regular construction updates and post the website address on the site of each Ontario Line Station.

27. City Council authorize the City Solicitor to introduce the necessary bills to give effect to City Council's decision and City Council authorize the City Solicitor to make any necessary clarifications, refinements, minor modifications, technical amendments, or by-law amendments as may be identified by the City Solicitor or General Manager, Transportation Services, in order to give effect to Parts 1 to 26 above.

FINANCIAL IMPACT

There is no financial impact to the City. Metrolinx and the Project Co. are responsible for all costs, including payment of fees to the City for the occupancy of the right-of-way. The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

City Council at its meeting on February 2, 2021, delegated the General Manager, Transportation Services, the authority to temporarily close to pedestrians and vehicular traffic highways or portion of highways for a period up to and including 365 consecutive days, until December 2030, inclusive, with the exception of those highways listed in Section 937-4 of Chapter 937, as required for the purpose of the construction of Ontario Line, excluding the proposed above ground section of the Ontario Line, between the Don River and Gerrard Street, and City Council exempt the General Manager, Transportation Services, in carrying out this delegated authority from Section 937-5 of Chapter 937, that being the requirement to notify the local Ward Councillor of the pending closure and the requirement to report on the proposed closure if so requested by the local Ward Councillor

[Agenda Item History - 2021.IE19.10 \(toronto.ca\)](#)

COMMENTS

The Ontario Line (OL) subway project will provide a rapid transit connection between the Ontario Science Centre and the Exhibition Place. The OL will consist of 15 stations on a 15.6-kilometre long alignment running over a combination of elevated, on-ground and underground sections. The Line will provide connection to the Eglinton Crosstown LRT (TTC Line 5) at the Science Centre Station, TTC Line 2 at the Pape Station, TTC Line 1 at the Queen and Osgoode Stations and GO Transit Service at the Exhibition Place and future East Harbour Stations. The OL alignment is shown in Figure 1 below:

The project is currently in the pre-construction phase with P3 (Project Co.) procurement underway to hire Project Co. for the rolling stock, systems, operations and maintenance (RSSOM) and the Southern Civil, Stations and Tunnel contracts. The Southern Civil contract covers the Line segment from Exhibition Place to Don Yard Portal (west of the Don River), and its financial close is expected in early 2022. The Project Co. procurement for the north segment, which covers the remainder of the alignment, is expected to start in 2022.

As part of the Southern Civil contract procurement, Metrolinx has provided project-specific output specifications (PSOS) to the bidders. The PSOS defines the project scope with performance-based specifications and promotes bidding with innovative design and delivery. The PSOS provides the locations, maximum number and duration of road closures that the bidders could use for the project design and delivery. Metrolinx developed the road closure requirements based on the constructability assessment of the OL stations and through detailed discussion with City staff.



Figure 1 – Ontario Line Alignment

Source: Metrolinx

Metrolinx have taken a proactive approach to try and minimise road closures and to limit the effects of long term construction on traffic, cycling and pedestrian flow, business and transit operations. Where full or partial road closures are unavoidable, the construction and road closure plan has been developed with the following guiding principles:

- Minimizing the extent and duration of closures.
- Ensuring a safe environment for pedestrians, vehicles, cyclists, construction staff, trades and contractors.
- Engaging with a broad base of stakeholders in the local communities impacted by construction and seeking to address their concerns in the construction planning
- Maintaining access to businesses for both customers and logistics.
- Maintaining access to transit and minimizing impacts transit operations; and
- Maintaining pedestrian flows where closures to vehicles are required.

The long-term temporary road closures at the OL stations will require City Council approval. Therefore, this report is coming forward now to provide assurance to bidders that the road closures in the PSOS are feasible and ensure that project construction begins without delay when the Project Co. joins the project.

Although the bidders are allowed to utilize all road closures listed in the PSOS, the procurement process incentivizes the bidders to innovate to achieve fewer and shorter duration road closures. The bid evaluation process determines a monetary value for the road closures and includes it as part of the overall cost for each of the bidders. In order to be competitive, the bidders and the successful proponent (Project Co.) are expected

to offer an effective design and delivery package with fewer road closures with fewer and shorter duration road closures than the maximum allowable in PSOS.

Additionally, Metrolinx will incorporate significant penalty provisions in the OL contract with the Project Co. to deter the actual number and duration of road closures from exceeding the bid submission. This is in line with Metrolinx and City staff's efforts to minimize the community impact of the long-term road closures and maintain traffic mobility during the OL construction.

In the event that any additional road closure time is required, either as a result of bids received (which is considered unlikely due to the contract structure) or during the construction phase, for example as a result of unforeseen circumstances, then City staff would carefully examine these and bring forward new recommendations to City Council for consideration, if necessary.

This report seeks City Council approval for the long-term temporary road closures at the OL King-Bathurst, Queen-Spadina, Osgoode, Queen, Moss Park and Corktown stations and discusses their impact on access by mode. Additionally, the report discusses the mitigation measures that are proposed and the Metrolinx communication strategy during construction of the project.

King-Bathurst Station

The OL King-Bathurst Station with entrances located in the north-east and south-east corners of King Street West and Bathurst Street will connect to the TTC 504 King and 511 Bathurst streetcar routes. Figure 2 shows the location of the station entrances and orientation of the OL tracks.

Early Works

Before Project Co.'s commencement of station construction, Enbridge, Toronto Hydro and Rogers utility infrastructure will require relocation to avoid any conflicts with the new transit infrastructure. Temporary lane closures on Bathurst Street and King Street West will be required to complete these works. Appendix A shows the details of the lane closures.

The notable temporary lane closures include the closure of the eastbound curb lane on King Street West and the northbound curb lane on Bathurst Street, abutting the future site of the station entrance building for five weeks starting on September 1, 2022. Additionally, Toronto Hydro work will require daily off-peak curb lane closures on King Street West to the west of Bathurst Street and on Bathurst Street to the south of King Street West.

The early works temporary road closures will be implemented under the General Manager, Transportation Services, delegated authority as found in section 937-3.16 of the City of Toronto Municipal Code Chapter 937, Temporary Closing of Highways. This permits the General Manager to temporarily close a highway or portions of highways to vehicular and pedestrian traffic for a period up to and including 365 consecutive days

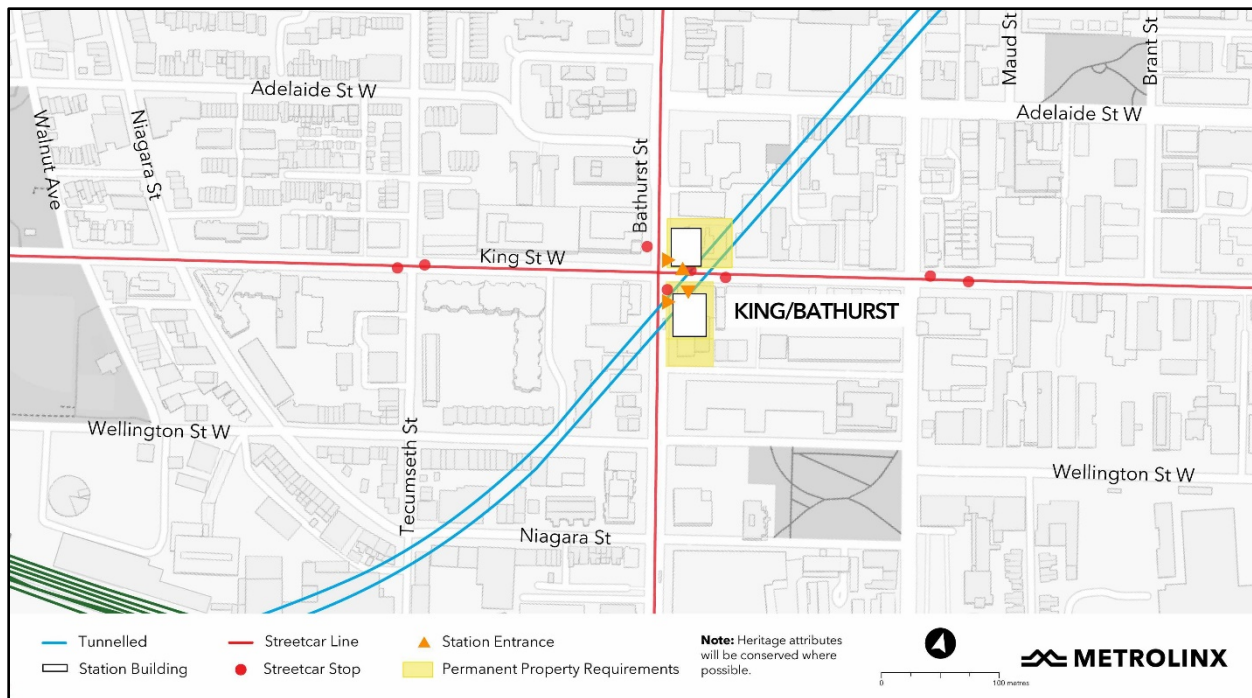


Figure 2 – Ontario Line King-Bathurst Station

Source: Metrolinx

until December 31, 2030, inclusive, as required for the purpose of the construction of the Ontario Line excluding the proposed above ground section of the Ontario Line between Don River and Gerrard Street. Before starting the work, Metrolinx and its contractor will provide advance notification to local businesses, community, Ward Councillor and other impacted stakeholders. Prior to issuance of any road occupancy permits City staff will review the traffic control plans to ensure the safety and mobility of all road users and property accesses are maintained. Additionally, coordination with other works in the area will be undertaken to minimize the network-wide traffic impacts.

Station Construction

The OL tunnel will pass diagonally under the intersection of King Street West and Bathurst Street. The tunnelling and most of the station construction will employ mining techniques, limiting the station construction impacts to the entrance buildings only.

Major construction activities at the OL King-Bathurst Station will consist of the following:

- July 2022 to June 2023 - Site setup, preparatory utility relocation and enabling works
- July 2023 to March 2026 - Station excavation - July 2023 to March 2026
- March 2026 to September 2027 - Below grade concrete work
- Fall 2026 to Fall 2027 - Exterior station works
- June 2027 to September 2028 - Interior station structure, mechanical, electrical, and plumbing work
- March 2028 to March 2029 - Station fit out and testing (escalators, elevators, etc.)
- April 2029 to November 2029 - Reopening of lane closures and public ROW

Temporary lane occupation within the road right-of-way abutting the station entrance buildings will be required to accommodate numerous truck trips for muck collection and

building material deliveries. The following long-term temporary road closures are required, from October 1, 2022 to November 30, 2029, for the station construction:

- The east sidewalk and a portion of the northbound curb lane on Bathurst Street, between King Street West and Stewart Street, will be temporarily closed. A 1.8 metre wide pedestrian walkway will be provided in the closed portion of the northbound curb lane.
- The south sidewalk and eastbound curb lane on King Street West, between Bathurst Street and a point 37 metres east will be temporarily closed. A 2.1 metres wide pedestrian walkway will be provided in the closed portion of the eastbound curb lane.
- The east sidewalk and northbound curb lane on Bathurst Street, between King Street West and a point 38 metres north, will be temporarily closed. A 1.8 metre wide pedestrian walkway will be provided in the closed portion of the northbound curb lane.
- The north sidewalk and westbound curb lane on King Street West, between Bathurst Street and a point 45 metres east, will be temporarily closed. A 2.1 metres wide pedestrian walkway will be provided in the closed portion of the westbound curb lane.
- The north sidewalk on Stewart Street, between Bathurst Street and a point 32 metres east will be temporarily closed.
- A portion of the eastbound lane on Stewart Street, between Bathurst Street and a point 32 metres east will be temporarily closed. A 1.8 metre wide pedestrian walkway will be provided in the closed portion of the roadway on Stewart Street.

The above listed long-term lane closures will require City Council approval and are shown in Figure 3. Appendix B shows the recommended traffic amendments associated with these lane closures. The lane closure impacts are discussed below.

Auto Access Impacts

As shown in Figure 3, the closure of the eastbound and westbound curb lanes on King Street West fronting the north and south station entrance buildings will result in one eastbound lane and one westbound lane to be shared by the TTC 504 King streetcar and general traffic. Vehicular access to all properties including 650 King Street West will be maintained. All existing traffic lanes on King Street West to the west of Bathurst Street will be maintained.

The closure of a portion of the northbound curb lane on Bathurst Street abutting the south entrance building will not affect availability of existing travel lanes. The closure of the northbound curb lane on Bathurst Street, abutting the north entrance building, will result in two northbound lanes. All southbound lanes on Bathurst Street will be maintained.

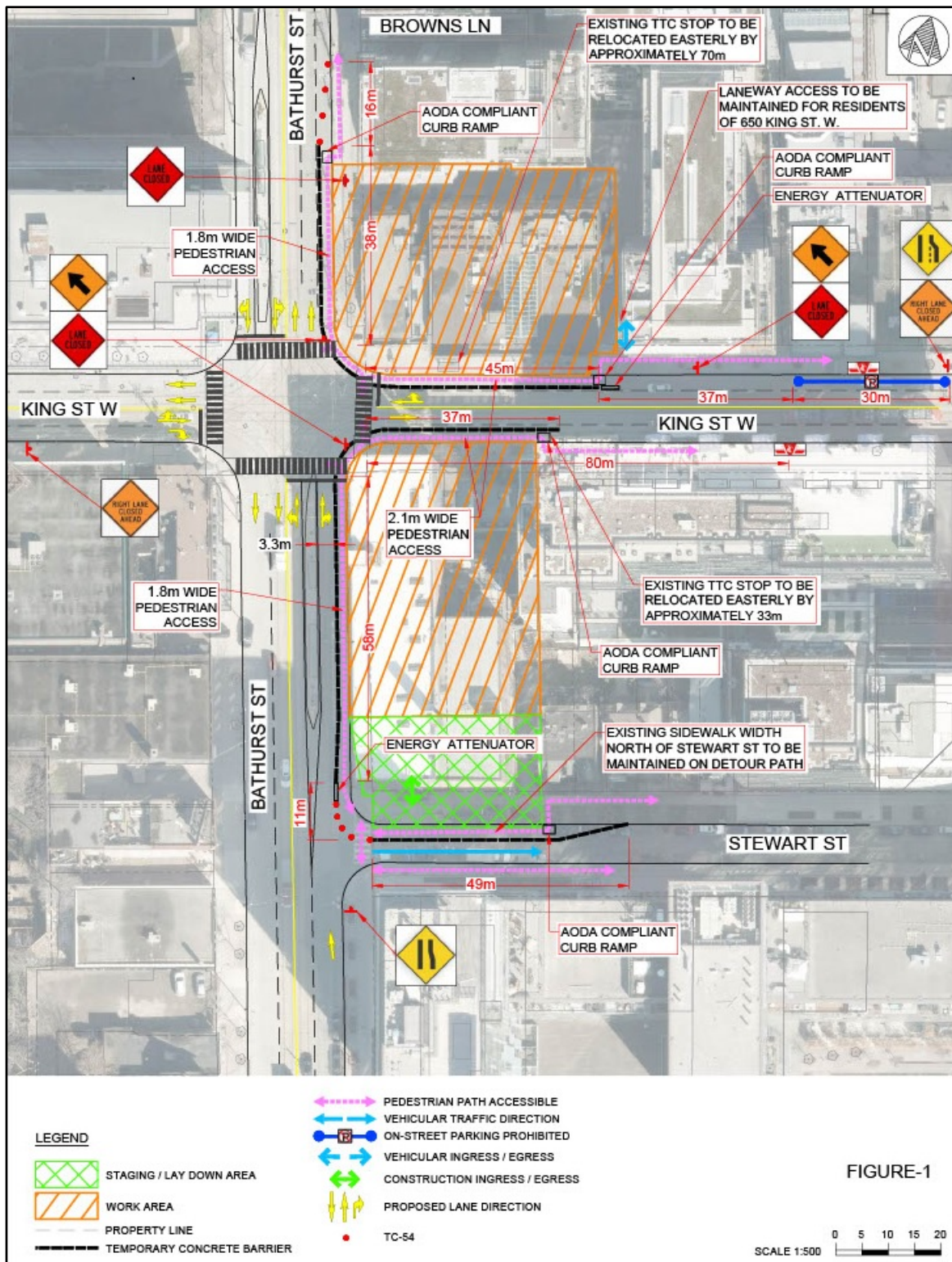


Figure 3 - Ontario Line King-Bathurst Station Lane Closures

Source: Metrolinx

The partial lane closure on Stewart Street, between Bathurst Street and a point 32 meters east, will result in an eastbound lane at least 3.3 metres wide. Approximately four on-street parking spaces and permit parking spaces within the closure limit will require removal. The Project Co. will coordinate with Toronto Parking Authority to pay the lost revenue of the removed pay and display on-street parking spaces. The removed four permit parking spaces are part of the permit parking area 6E, which currently operates at capacity. The Project Co. will be responsible for providing temporary off-street replacement parking spaces in a nearby private underground or at-grade parking facility.

All vehicular accesses will be maintained with no detours required. Additionally, all accessible loading zones will be maintained.

Pedestrian Impacts

All pedestrian movements along King Street West, Bathurst Street and Stuart Street will be maintained. The site set up, signage and maintenance of temporary routes around work zones will ensure pedestrian safety, including keeping them free of any debris, loose material and snow and ice.

Cycling Impacts

There are currently no dedicated bike lanes on King Street West and Bathurst Street. Bicyclists will continue to share the travel lanes with the general traffic.

The north sidewalk and partial lane closure on Stewart Street will require removal of the bike-share facility. Metrolinx will coordinate with Toronto Parking Authority for the removal and relocation of the bike share stand.

Transit Impacts

The lane closures on King Street West will have no impact on the TTC 504 King streetcar service. A minimum one metre wide safety setback from the TTC streetcar track allowance will be maintained. The eastbound and westbound transit stops on King Street West will require temporary relocation which Metrolinx will coordinate and discuss with TTC before finalizing the new locations. At this point in time the current proposal is that the eastbound transit stop will be relocated approximately 35 metres further east of its current location and the westbound transit stop will be relocated approximately 70 metres east of its current location. The relocation of the eastbound transit stop will impact the on-street taxi stand which has six parking spaces and the relocation of the westbound transit stop will impact the on-street commercial loading area.

The section of King Street West, in the vicinity of the OL Station site is part of the King Street Transit Priority Corridor, which stretches from Bathurst Street to Jarvis Street. Various public realm improvements were previously implemented on this corridor and will be unaffected by the lane closures on King Street West at Bathurst Street.

The TTC 511 Bathurst streetcar service and transit stops will not be impacted by the lane closures on Bathurst Street.

Emergency Vehicle Impact

The lane closures on King Street West and Bathurst Street will not require detour of emergency vehicles.

Business Access Impact

All business accesses will be maintained during construction.

Haul Routes

Metrolinx estimates that the station excavation will produce approximately 72,000 cubic metres of spoils, generating up to 20 truck trips per day. Additionally, the station construction will require multiple truck deliveries of concrete, reinforced steel, station finishes, escalators, elevators, etc. and will generate up to 20 truck trips per day. Figures 4 and 5 show the potential inbound and outbound haul routes to the OL King-Bathurst Station. These routes will be confirmed and refined when the Project Co. joins the project.

The haul routes shown on the Figures below utilize Bathurst Street Northbound to access the work sites in the north-east and south-east quadrants of King Street West and Bathurst Street. The trucks serving the north-east side will enter the site by making a right-turn from Bathurst Street and leave the site by making a right-turn onto Bathurst Street. The trucks will travel up Bathurst Street and continue eastbound on Adelaide Street to Spadina Avenue and then proceed southbound to connect with the Gardiner Expressway.

The trucks serving the south-east side will access the staging area on the north side of Stewart Street by making a right-turn from Bathurst Street. After serving the site, the trucks will proceed eastbound on Stewart Street and onto Portland Street southbound to connect with either Wellington Street or Front Street. There are no turn or truck restrictions identified along the proposed haul routes.

Trucks will enter and exit the work sites in a forward motion and traffic control persons will be positioned at the site access and egress to prevent any conflict between the construction vehicles and pedestrians. Site hoarding and staging area will be designed to ensure clear sight lines are available for both pedestrians and truck drivers. The Project Co. will ensure the work zone is well lit to provide full visibility of pedestrians to the truck drivers.

City staff and Metrolinx are acutely aware that increased truck traffic on the haul routes potentially poses increased risk to pedestrians and cyclists. City staff will work with Metrolinx and Project Co. to implement strategies to ensure Vision Zero principles are followed and these potential risks are minimised.

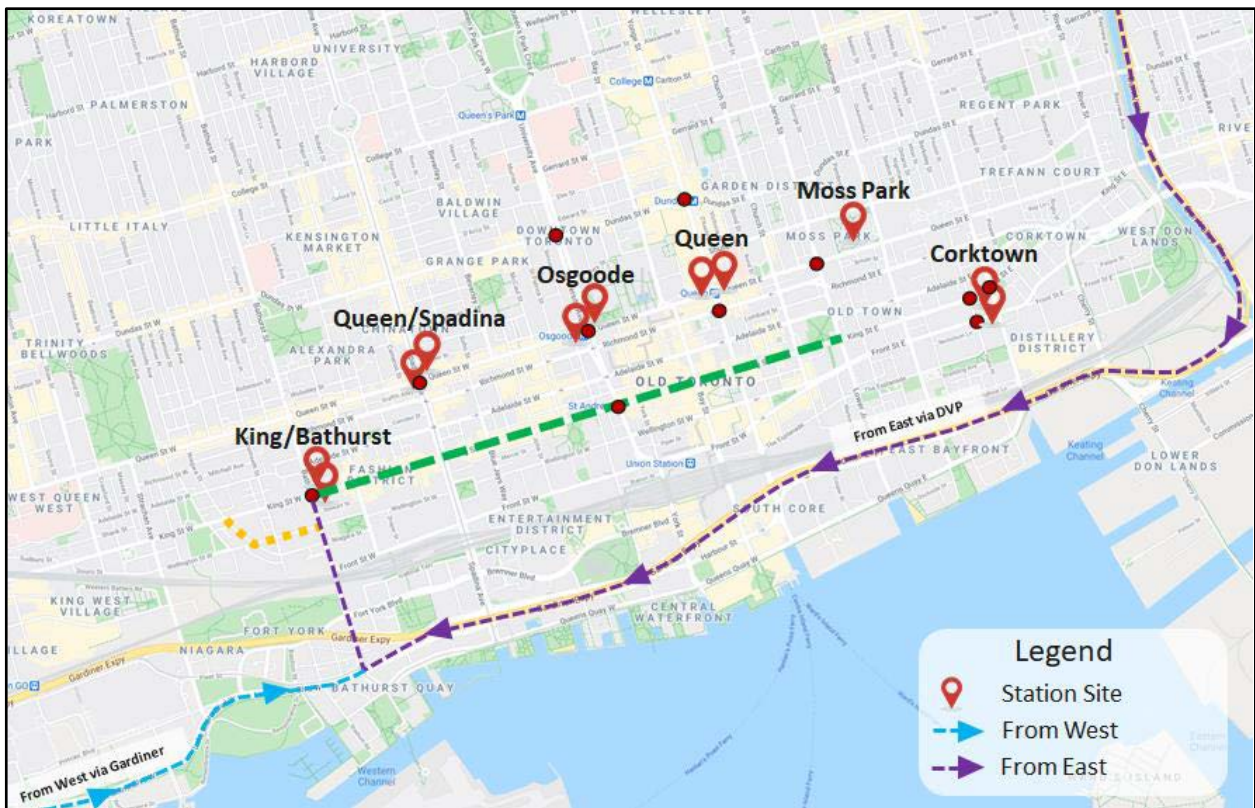


Figure 4 – Potential Inbound Haul Routes for OL King-Bathurst Station

Source: Metrolinx

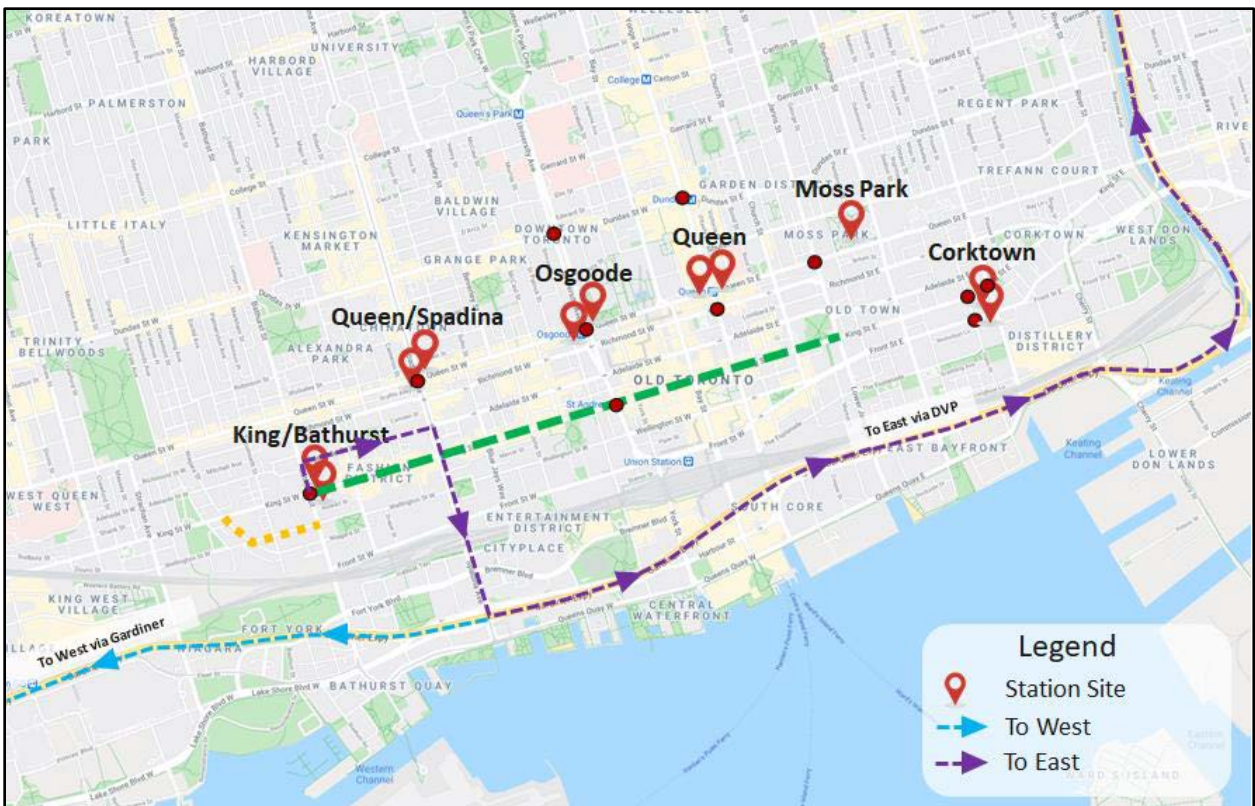


Figure 5 – Potential Outbound Haul Route for OL King-Bathurst Station

Source: Metrolinx

Queen-Spadina Station

The OL tracks will pass in an east-west orientation under Queen Street West at Spadina Avenue. The station entrances in the northeast and southwest corners of the intersection will connect the OL Queen-Spadina Station and TTC 501 Queen and 510 Spadina streetcar service. Figure 6 below shows the location of the Station.

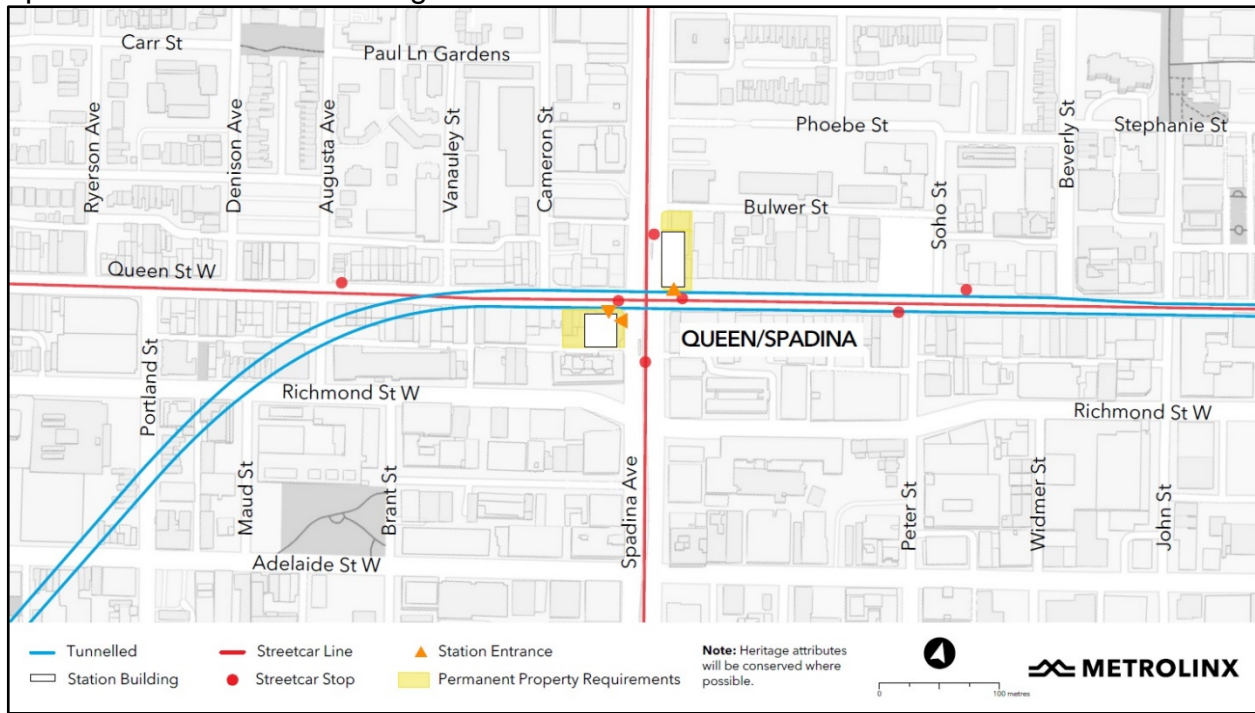


Figure 6 – Ontario Line Queen-Spadina Station

Source: Metrolinx

Early Works

Enbridge gas infrastructure relocation will require temporary lane closures on Richmond Street West, Peter Street and Spadina Avenue. Appendix A shows the details of the lane closures.

Completing Enbridge gas related works will require temporary road closures on Richmond Street, between Peter Street and Spadina Avenue, for up to one month. Pedestrian and bicycle lane operations will be maintained at all times. All property accesses will be maintained during construction work.

The early works temporary road closures will be implemented under the General Manager, Transportation Services, delegated authority as found in section 3.16 of the City of Toronto Municipal Code Chapter 937, Temporary Closing of Highways. This permits the General Manager to temporarily close a highway or portions of highways to vehicular and pedestrian traffic for a period up to and including 365 consecutive days until December 31, 2030, inclusive, as required for the purpose of the construction of the Ontario Line excluding the proposed above ground section of the Ontario Line between Don River and Gerrard Street. Before starting the work, Metrolinx and its contractor will provide advance notification to local businesses, community, Ward Councillor and other impacted stakeholders. Prior to issuance of any road occupancy permits City staff will review the traffic control plans to ensure the safety and mobility of

all road users and property accesses are maintained. Additionally, coordination with other works in the area will be undertaken to minimize the network-wide traffic impacts.

Station Construction

Mining techniques will be used for the station construction, resulting in limited impacts at the street level. Most of the station construction activities will be at the station entrance buildings.

Major construction activities at the OL Queen-Spadina Station will consist of the following:

- July 2022 to February 2023 - Utility relocation and site setup
- January 2023 to June 2023 - Enabling works
- July 2023 to March 2026 - Station excavation
- March 2026 to September 2027 - Station main concrete work
- Fall 2026 to Fall 2027 - Exterior station works
- June 2027 to September 2028 - Interior station structure, mechanical, electrical, and plumbing work
- March 2028 to March 2029 - Station fit out and testing (escalators, elevators, etc.)
- April 2029 to November 2029 - Reopening of lane closures and public ROW

Temporary lane occupation within the road right-of-way abutting the station entrance buildings will be required to provide a safe and controlled space for truck loading and unloading operations. The following long-term temporary road closures are required, from October 1, 2022 to November 30, 2029, for the station construction:

- The south sidewalk on Queen Street West, between Spadina Avenue and a point 53 metres west, will be closed.
- The eastbound curb lane on Queen Street West, between Spadina Avenue and a point 83 metres west, will be closed. A 2.1 metres wide pedestrian sidewalk will be provided in the closed portion of the eastbound curb lane.
- The east sidewalk and parking lane on Spadina Avenue, between Queen Street West and Bulwer Street, will be closed. A 2.1 metres wide pedestrian sidewalk will be provided in the closed portion of the parking lane.
- A portion of the south sidewalk on Bulwer Street between Spadina Avenue and a point 18 metres east, will be closed for three months starting on October 1, 2022.

The above listed lane closures require City Council approval and are shown in Figure 7. Appendix B shows the recommended traffic amendments associated with these lane closures. Additionally, the lane closure impacts are discussed below

Auto Access Impacts

All existing travel lanes on Spadina Avenue will be maintained, although the curbside parking lane on the east side of Spadina Avenue, between Queen Street West and Bulwer Street, will need to be removed, resulting in a loss of approximately eight on-

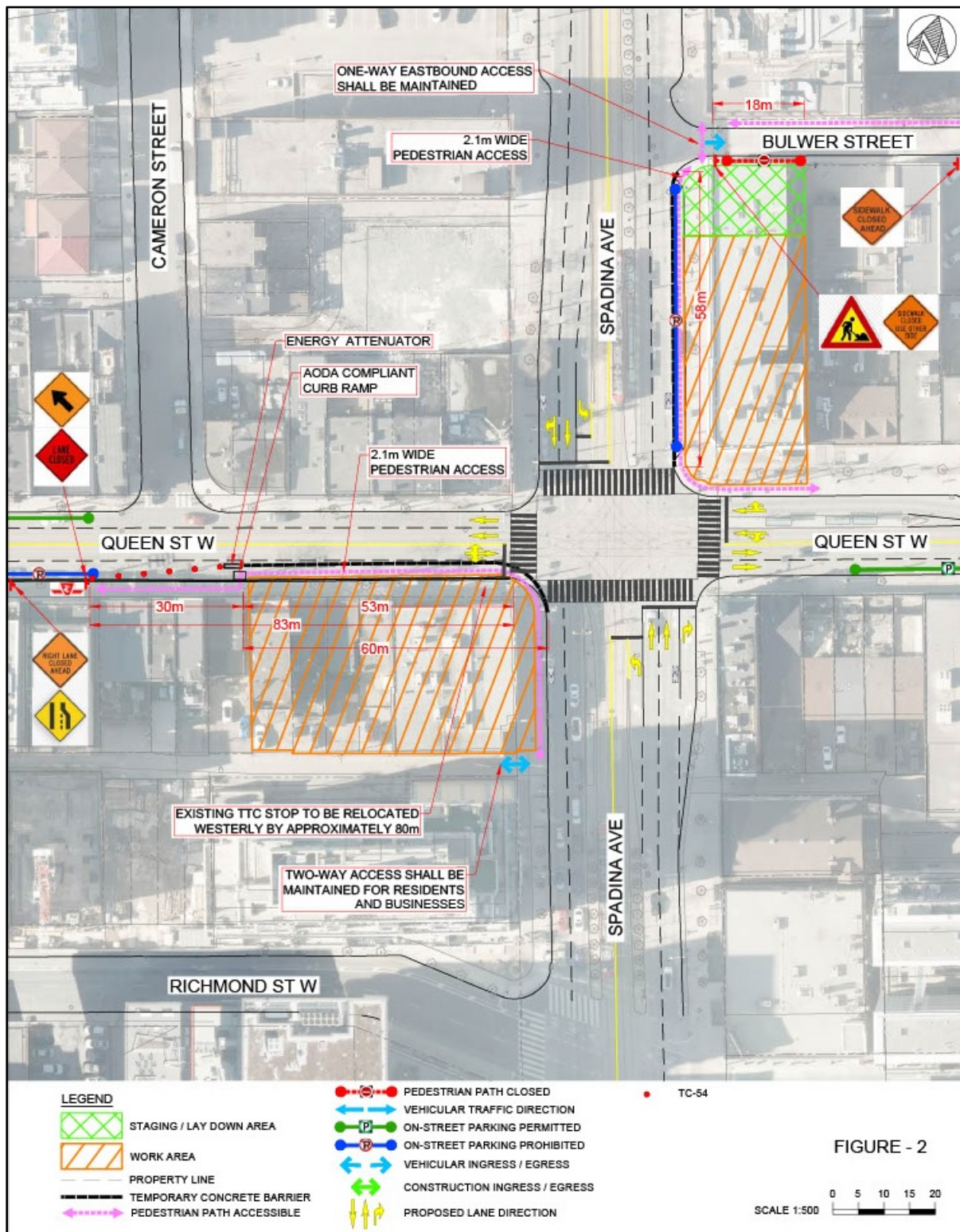


Figure 7 – Ontario Line Queen-Spadina Station Lane Closures

Source: Metrolinx

street "Pay and Display" parking spaces. The nearby available on-street parking spaces can readily accommodate this loss of parking. The Project Co. will coordinate with Toronto Parking Authority to pay the lost revenue of the removed parking spaces.

The closure of the eastbound curb lane on Queen Street West, between Spadina Avenue and a point 83 metres west, will result in one eastbound lane and two westbound lanes. Additionally, the lane closure will remove approximately seven on-street "Pay and Display" parking spaces located on the south side of Queen Street West within the closure limits. The removal of on-street parking spaces is not expected to impact the parking supply in the area significantly. The Project Co. will be responsible for paying Toronto Parking Authority for the lost revenue from these parking spaces.

All vehicular access along Queen Street West, Spadina Avenue and Bulwer Street will be maintained with no detours required. In addition, vehicular access to Graffiti Alley will be maintained.

Pedestrian Impacts

All pedestrian movements at the lane closure locations on Queen Street West and Spadina Avenue will be maintained on a minimum 2.1 metres wide temporary pathway. The site set up, signage and maintenance of temporary routes around work zones will ensure pedestrian safety, including keeping them free of any debris, loose material and snow and ice.

Cycling Impacts

There are currently no dedicated bike lanes on Queen Street West and Spadina Avenue in the vicinity of the OL Station site. Bicyclists will continue to share the travel lanes with the general traffic.

Transit Impacts

The lane closure on Queen Street West will not impact the TTC 501 Queen streetcar service. A minimum one metre wide safety setback from the TTC streetcar track allowance will be maintained. The nearside eastbound streetcar stop on Queen Street West at Spadina Avenue will require relocation to approximately 80 metres west of its current location, just west of the eastbound curb lane closure limit. The transit stop relocation will require the removal of approximately five on-street parking spaces on the south side of Queen Street West. The Project Co. will be responsible for paying Toronto Parking Authority the loss of revenue due to the removed parking spaces.

The parking lane closure on Spadina Avenue at Queen Street West will not impact the TTC 510 Spadina streetcar service, and no relocation of the transit stops is required.

Emergency Vehicle Impact

The lane closures on Queen Street West and Spadina Avenue will not require detour of emergency vehicles.

Business Access Impact

All business accesses will be maintained during construction. All commercial loading zones will be maintained.

Haul Routes

Metrolinx estimates that the station excavation will produce approximately 90,000 cubic metres of spoils. Additionally, the station construction will require multiple deliveries of shotcrete, concrete, reinforced steel, station finishes, escalators, elevators, etc. The station excavation and construction stages are expected to generate up to 25 trucks per day. Figures 8 and 9 show the potential haul routes to the OL Queen-Spadina Station. These routes will be confirmed and refined when the Project Co. joins the project.

The haul routes shown on the Figures below utilize Queen Street West to access the work site in the south-west quadrant of the intersection of Queen Street West and Spadina Avenue. Additionally, Spadina Avenue will be utilized by trucks accessing the north-east work site.

The trucks serving the south-west work site will travel northbound on Bathurst Street and continue eastbound on Queen Street West and make a right-turn into the site. After serving, the trucks will leave the site in a forward motion and turn right on Spadina Avenue Southbound and connect with the Gardiner Expressway.

The trucks serving the north-east work site will travel northbound on Spadina Avenue and turn right into the site. After serving the site, the trucks will travel up Spadina Avenue and make a U-turn manoeuvre on the U-turn signal at Sullivan Street. The trucks will proceed southbound on Spadina Avenue to connect with the Gardiner Expressway. There are no turn or truck restrictions identified along the proposed haul routes. Alternatively, the trucks could proceed northbound on Spadina Avenue to connect with Dundas Street eastbound or westbound.

Trucks will enter and exit the site in a forward motion and traffic control persons will be positioned at the site access and egress to prevent any conflict between the construction vehicles and pedestrians. Site hoarding and staging area will be designed to ensure clear sight lines are available for both pedestrians and truck drivers. The Project Co. will ensure the work zone is well lit to provide full visibility of pedestrians to the truck drivers.

City staff and Metrolinx are acutely aware that increased truck traffic on the haul routes potentially poses increased risk to pedestrians and cyclists. City staff will work with Metrolinx and Project Co. to implement strategies to ensure Vision Zero principles are followed and these potential risks are minimised.

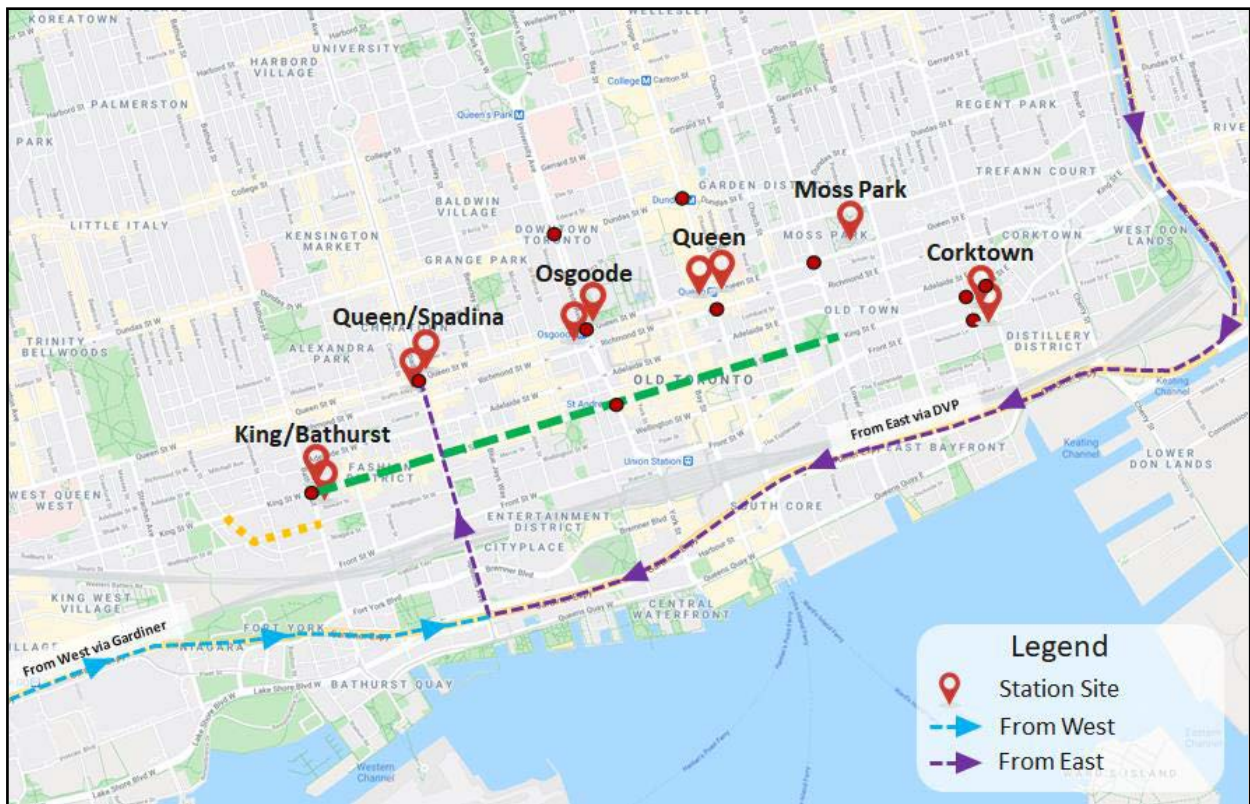


Figure 8 – Potential Inbound Haul Routes for OL Queen-Spadina Station

Source: Metrolinx

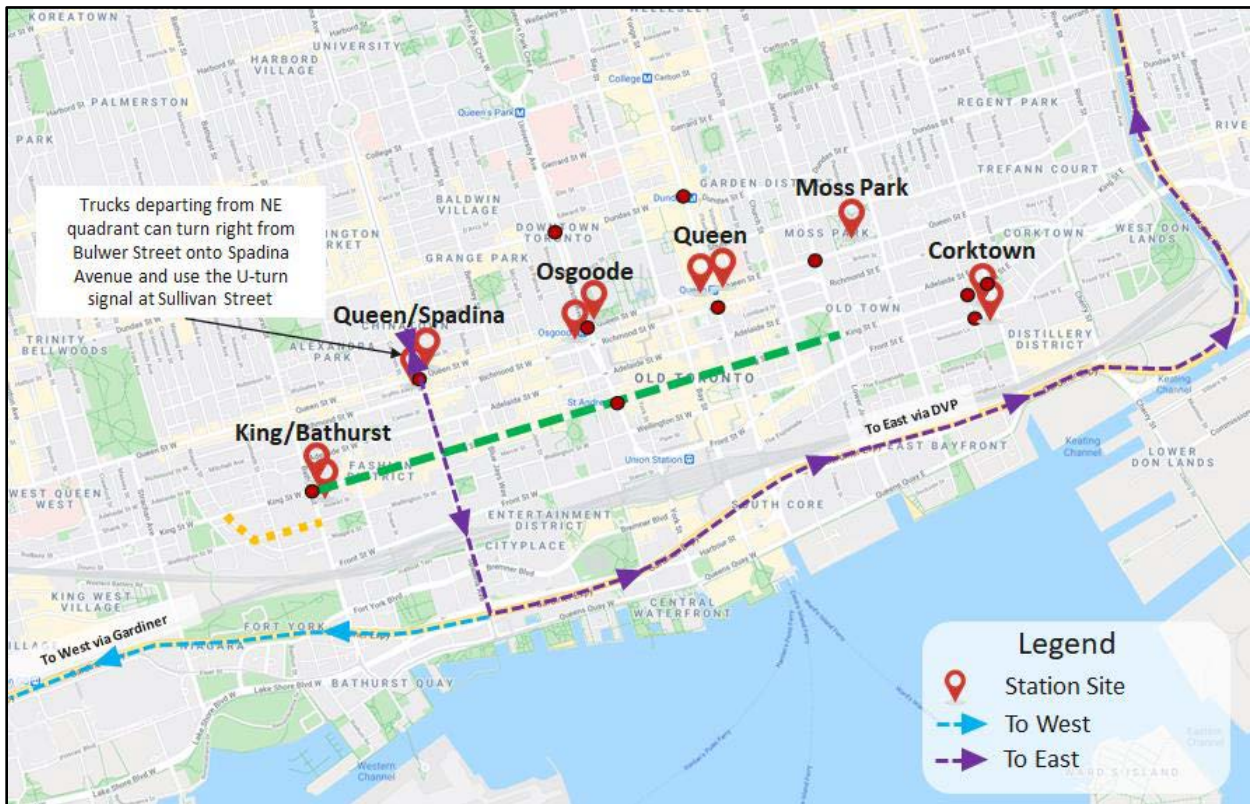


Figure 9 – Potential Outbound Haul Routes for OL Queen-Spadina Station

Source: Metrolinx

Osgoode Station

The OL Osgoode Station will be the interchange station providing a direct connection to the TTC Line 1 Yonge-University. The station will be located directly below the existing Line 1 Osgoode Station. The station access will be provided through two new entrances with the east entrance at the Queen-University intersection and west entrance at the Queen-Simcoe intersection. Figure 10 below shows the location of the Station.

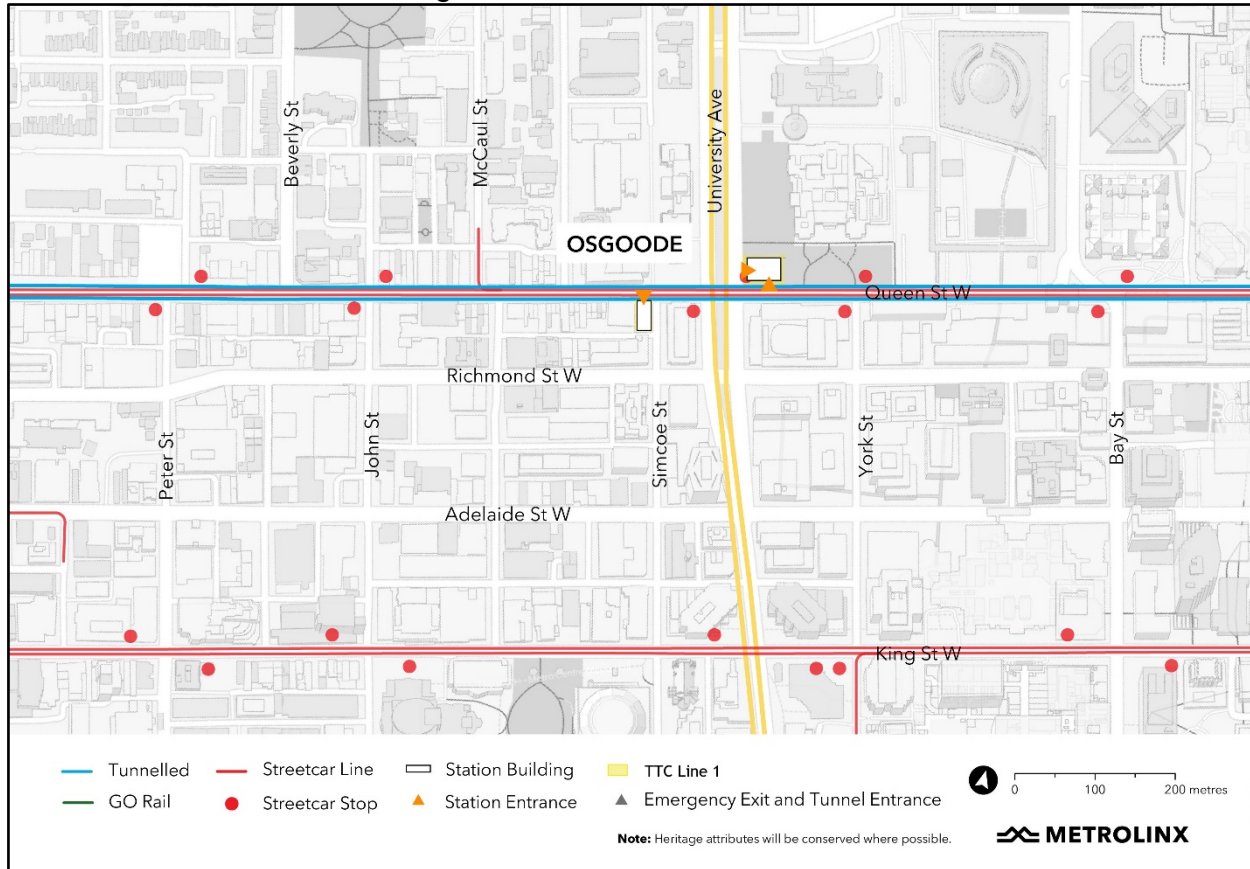


Figure 10 – Ontario Line Osgoode Station

Source: Metrolinx

Early Works

Metrolinx will complete utility relocation work at the OL Osgoode Station before the Project Co. begins station construction. The utility relocation work will require closure of traffic lanes on University Avenue and Simcoe Street and are detailed in Appendix A.

Notable temporary lane closures includes the southbound and northbound lanes on University Avenue, between Queen Street West and Armoury Street, reduced to one traffic lane and a bike lane in each direction for a period of six months, starting in May 2022 and June 2022, respectively.

Furthermore, off-peak and nightly closures of a portion of the southbound lane and west sidewalk on Simcoe Street, between Queen Street West and Richmond Street West will be required to complete Enbridge gas and Rogers infrastructure relocation work.

The early works temporary road closures will be implemented under the General Manager, Transportation Services, delegated authority, as found in section 937-3.16 of the City of Toronto Municipal Code Chapter 937, Temporary Closing of Highways. This permits the General Manager to temporarily close a highway or portions of highways to vehicular and pedestrian traffic for a period up to and including 365 consecutive days until December 31, 2030, inclusive, as required for the purpose of the construction of the Ontario Line excluding the proposed above ground section of the Ontario Line between Don River and Gerrard Street. Before starting the work, Metrolinx and its contractor will provide advance notification to local businesses, community, Ward Councillor and other impacted stakeholders. Prior to issuance of any road occupancy permits City staff will review the traffic control plans to ensure the safety and mobility of all road users and property accesses are maintained. Additionally, coordination with other works in the area will be undertaken to minimize the network-wide traffic impacts.

Station Construction

The station construction will employ mined techniques to limit surface level impacts along Queen Street West. Therefore, most of the construction impacts at the Osgoode Station will be at the two entrance buildings.

Major construction activities at the Station will consist of the following:

- March 2022 to May 2023 - Utility Relocation as part of the Early Works
- July 2022 to November 2024 - Site setup and preparatory works
- January 2023 to June 2023 - Enabling works
- July 2023 to March 2026 - Station excavation
- March 2026 to September 2027 - Station main concrete work
- Fall 2026 to Fall 2027 - Exterior station work
- August 2027 to October 2028 - Interior station structure, mechanical, electrical and plumbing work
- May 2028 to May 2029 - Station fit out and testing (escalators, elevators etc.)
- April 2029 to November 2029 - Reopening of lane closures and public ROW

The Project Co. will set up a construction staging area within the Osgoode Hall property for most construction staging operations at the Queen-University site. However, numerous construction trucks at the site will require a temporary lane occupation on University Avenue abutting the Osgoode Hall for loading and unloading operations involving muck removal and construction material deliveries. Similarly, truck deliveries to the Queen-Simcoe site will require a temporary lane occupation on Simcoe Street abutting the site. Additionally, storage of the heritage façade of the existing CIBC building at the Queen-Simcoe site will require a lane occupation on Simcoe Street, between the public laneway and Richmond Street West. The Project Co. will preserve these heritage facades as part of the station entrance building construction.

The following long-term temporary road closures are required from October 1, 2022 to November 30, 2029 for the station construction:

- The east sidewalk on University Avenue, between Queen Street West and a point 110 metres north, will be closed.

- The northbound bike lane on University Avenue, between Queen Street West and a point 122 metres north, will be closed.
- The northbound auxiliary lane on University Avenue, between Queen Street West and a point 102 metres north, will be closed.
- The southbound innermost median lane on University Avenue, between a point 17 metres north of Queen Street West and a point 63 metres further north, will be closed.
- The west sidewalk on Simcoe Street, between Queen Street West and the public laneway, will be closed.
- An 8.4 metre wide portion of the roadway on the west side of Simcoe Street, between Queen Street West and Richmond Street, will be closed.

The above listed lane closures will require City Council approval and are shown in Figure 11. Appendix B shows the recommended traffic amendments associated with these lane closures. Additionally, the lane closure impacts are discussed below:

Auto Access Impacts

Temporary occupation of the east sidewalk and a portion of the northbound bike lane, auxiliary lane and parking lane on the east side of University Avenue abutting the Osgoode Hall will be required to accommodate numerous construction trucks at the site. The northbound traffic lanes on University will be realigned to maintain the existing traffic operations and result in two 3.3 metres wide through traffic lanes and a 2 metres wide bike lane. The temporary occupation of the east side parking lane will result in removal of approximately three on-street "Pay and Display" parking spaces. The Project Co. will be responsible for paying Toronto Parking Authority the lost revenue from the removed parking spaces.

Additionally, a portion of the southbound innermost median lane on University Avenue, between Queen Street West and Armoury Street, will be temporarily closed to accommodate the TTC Line 1 integration works. The southbound lanes on University Avenue will be realigned to provide two 3.3 metres wide through traffic lanes and a 2 metres wide bike lane. The realignment of the lanes will require the removal of approximately two on-street "Pay and Display" parking spaces. The Project Co. will be responsible for paying Toronto Parking Authority the lost revenue from the removed parking spaces.

At the Queen-Simcoe Site, the Project Co. will require a temporary occupation of a portion of the southbound lane on Simcoe Street, between Queen Street West and Richmond Street West. In addition, the existing roadway curb on the east side of Simcoe Street, between Queen Street West and Richmond Street West, will require relocation to the east to maintain a 3.3 metres wide pavement width and a 1.5 metre bike lane.

The lane occupation on the subject section of Simcoe Street will require temporary removal of six on-street "Pay and Display" parking spaces on the west side of Simcoe Street. The Project Co. will be responsible for paying Toronto Parking Authority for the

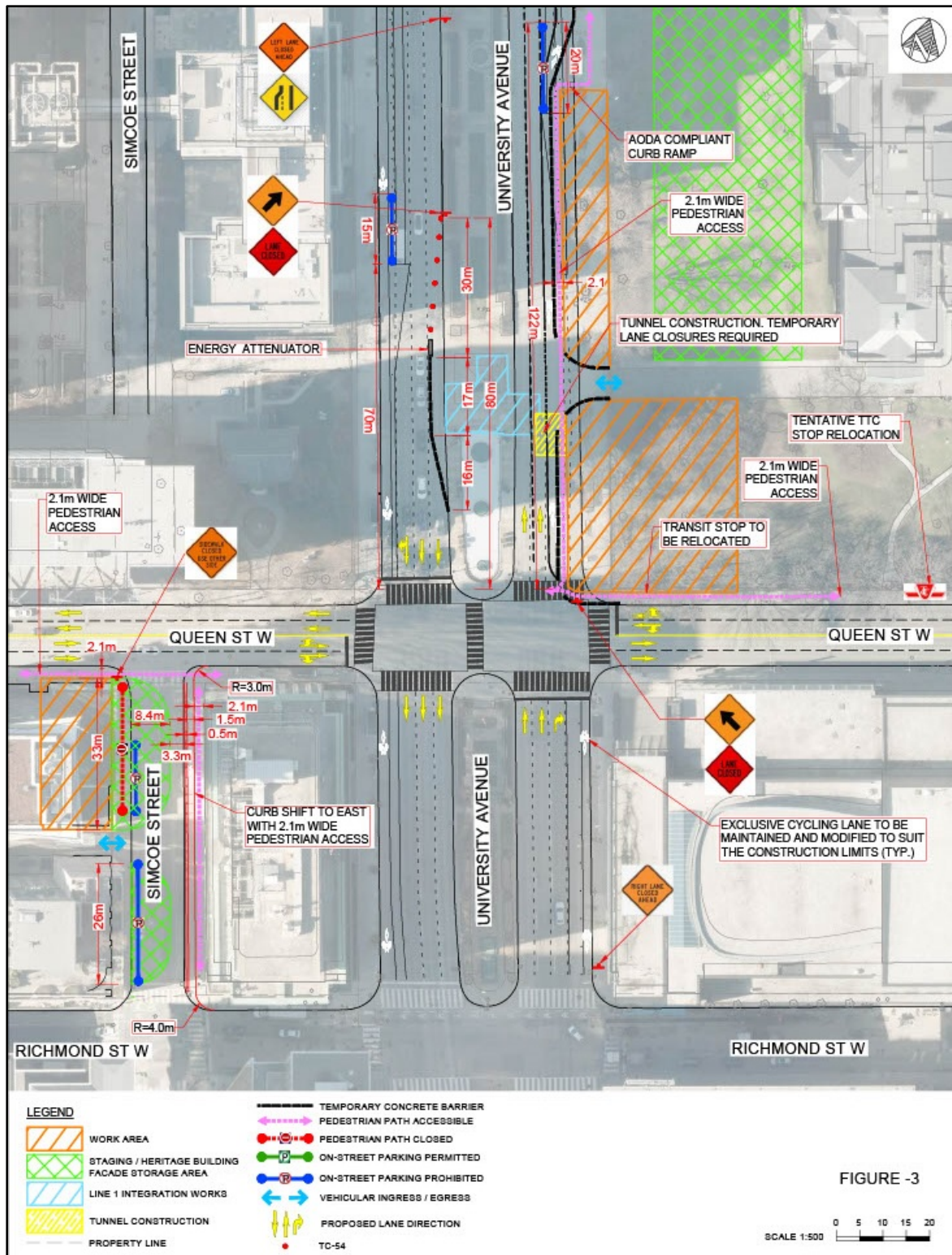


Figure 11 – Ontario Line Osgoode Station Lane Closures

Source: Metrolinx

lost revenue from the removed parking spaces. Removing the on-street parking spaces will impact the short-term parking opportunity for parents picking up and dropping off children at the Kinder College daycare centre located at 218 Richmond Street West.

Metrolinx and the Project Co. will coordinate with the daycare centre and provide an alternative nearby parking arrangement to continue the pick-up and drop-off at the daycare.

All vehicular access along Queen Street West, University Avenue, Simcoe Street and the public laneway will be maintained with no detours required.

Pedestrian Impacts

North-south and east-west pedestrian movements at the Queen-University work site will be maintained on a 2.1 metres wide temporary pedestrian walkway.

The west sidewalk on Simcoe Street, between Queen Street West and the public laneway will be closed. A pedestrian detour will be provided on a 2.1 metres wide sidewalk on the east side of Simcoe Street, between Queen Street West and Richmond Street West.

The site set up, signage and maintenance of temporary routes around work zones will ensure pedestrian safety, including keeping them free of any debris, loose material and snow and ice.

Cycling Impacts

The existing northbound curbside bicycle lane on University Avenue fronting the Osgoode Hall will be closed for construction staging purposes. However, the northbound travel lanes on University Avenue will be realigned and a protected 2.0 metres wide northbound bicycle lane around the work zone will be provided. There are currently no dedicated bike lanes on Queen Street West and bicyclists will continue to share the travel lanes with the general traffic.

The existing northbound bike lane on Simcoe Street will be maintained with 1.5 metre wide bicycle lane and 0.5 metres buffer from the traffic lane. Southbound cyclists will continue to share the traffic lane with shared lane markings in place.

Transit Impacts

The lane closures on University Avenue and Simcoe Street will not impact the subway service on the TTC Line 1 Yonge-University. In addition, the lane closures will not impact the TTC 501 Queen streetcar service.

The existing nearside westbound streetcar stop on Queen Street West at University Avenue will require temporary relocation further east of its current location. The eastbound nearside streetcar stop will not be affected.

Pedestrian access to the TTC Line 1 Osgoode Station entrance located in the north-east corner of the intersection of Queen Street West and University Avenue will not be possible during the construction of the OL Osgoode Station. However, pedestrian access to TTC Line 1 Osgoode Station will be maintained on both the south east and south west sides of the intersection.

Emergency Vehicle Impact

The lane closures on Queen Street West and University Avenue will not require detour of emergency vehicles.

Business Access Impact

All business accesses will be maintained during construction. All commercial loading zones will be maintained.

Haul Routes

Metrolinx estimates that the station excavation will produce approximately 96,000 cubic metres of spoils. Additionally, multiple truck deliveries of concrete, reinforced steel and station fitting material will be required during the station construction stage. The station excavation and construction stages are estimated to generate up to 25 truck trips per day. Figures 12 and 13 show the potential haul routes to the OL Osgoode Station. These routes will be confirmed and refined when the Project Co. joins the project.

The trucks arriving from the east will utilize Richmond Street to access University Avenue. Additionally, the trucks arriving from the west will utilize York Street-University Avenue to access the work sites.

The trucks serving the Queen-University work site will proceed northbound on University Avenue and make a right-turn into the site. After serving, the trucks will leave the site by making a right-turn onto University Avenue. The trucks will travel up University Avenue to make a U-turn at the centre median just south of Armoury Street. Alternatively, the trucks can continue north on University Avenue and turn right on Dundas Street to go east.

The trucks serving the Queen-Simcoe work site will proceed northbound on University Avenue and turn left onto Queen Street West and then left onto Simcoe Street. Alternatively, the trucks can utilize Spadina Avenue Northbound to connect with Queen Street West and Simcoe Street. After serving the site, the trucks will leave the site in a forward motion. The trucks on Simcoe Street Southbound can utilize Richmond Street to connect with Spadina Avenue or Adelaide Street to connect with University Avenue.

Trucks will enter and exit the site in a forward motion to ensure visibility of the road users during truck turning manoeuvres. Traffic control persons will be positioned at the site access and egress to prevent any conflict between the construction vehicles and pedestrians. Site hoarding and staging area will be designed to ensure clear sight lines are available for both pedestrians and truck drivers. The Project Co. will ensure the work zone is well lit to provide full visibility of pedestrians to the truck drivers.

City staff and Metrolinx are acutely aware that increased truck traffic on the haul routes potentially poses increased risk to pedestrians and cyclists. City staff will work with Metrolinx and Project Co. to implement strategies to ensure Vision Zero principles are followed and these potential risks are minimised.

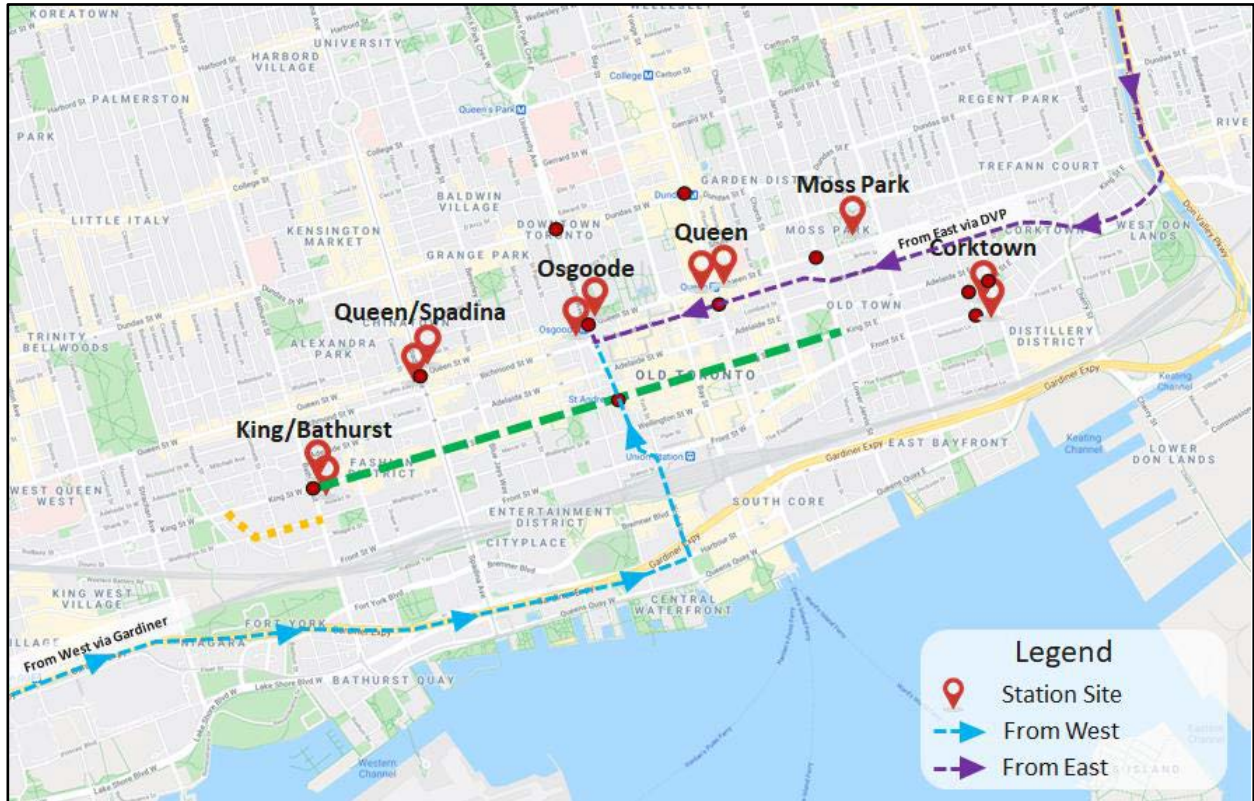


Figure 12 – Potential Inbound Haul Routes for OL Osgoode Station

Source: Metrolinx

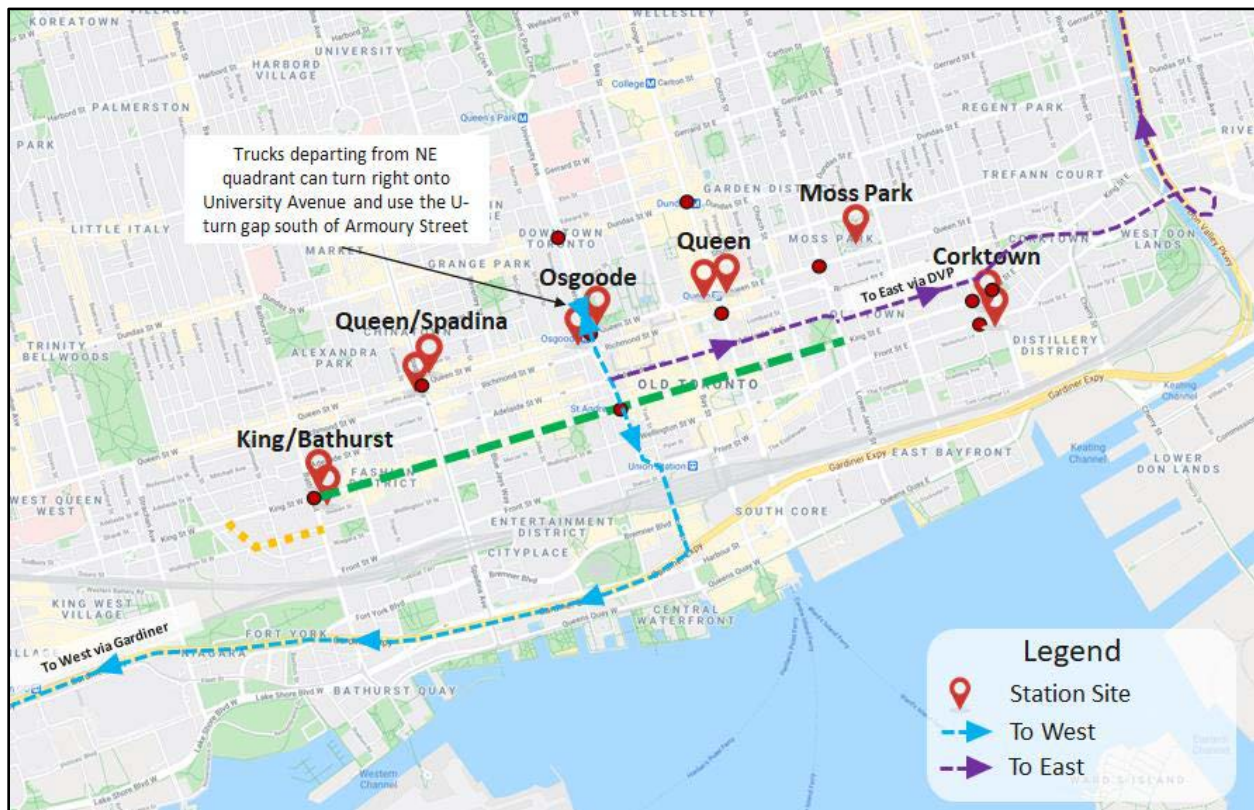


Figure 13 – Potential Outbound Haul Routes for OL Osgoode Station

Source: Metrolinx

Queen Station

The OL Queen Station will be located directly under the existing TTC Line 1 Queen Station at Queen Street and Yonge Street. The station will connect with the TTC Line 1, allowing seamless and direct transfer between the two lines. The station access will be provided through existing TTC subway entrances by retrofitting them to meet current accessibility standards. The vent shafts for the station will be located near James Street and Victoria Street. Figure 14 shows the station location.

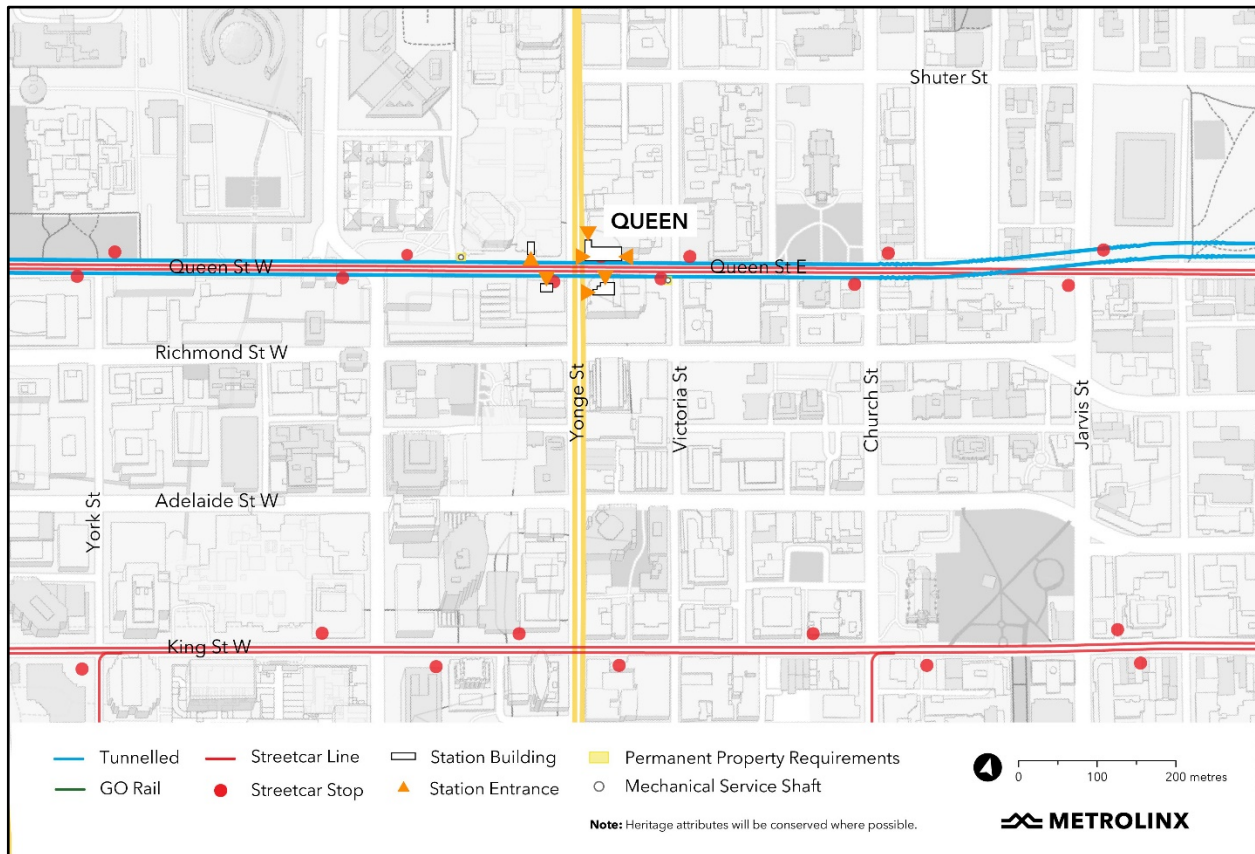


Figure 14 – Ontario Line Queen Station

Source: Metrolinx

Early Works

Before Project Co.'s commencement of station construction, Metrolinx will relocate the existing utilities to make way for the station box under Queen Street. These utilities include watermain, sewer, underground telecom, hydro and gas line infrastructure. Additionally, as part of the early works, Metrolinx will undertake work to facilitate TTC installation of additional streetcar tracks on York Street, between Queen Street West and Adelaide Street West, to provide a detour for the TTC Queen 501 streetcar during construction of the Queen Station. All these works will take place between January 2022 and May 2023.

Since most of the early works will take place in the road right-of-way, temporary road closures will be required as shown on Appendix A.

Noteworthy early works road closures include a temporary full closure of Queen Street for two non-consecutive periods of six weeks. The first full closure is planned between June 2022 and August 2022 and will extend from Bay Street to Victoria Street. The second full closure of Queen Street is planned between May 2023 and July 2023 and will extend from James Street to Victoria Street. To minimize the impact of road closures on the community, Metrolinx is exploring the opportunity to combine the second road closure of Queen Street with the full closure of Queen Street for the station construction, scheduled to start in May 2023. Bay Street, Yonge Street and Victoria Street will remain open to autos, bicyclists and pedestrians. However, the existing TTC 501 Queen streetcar service will not be maintained, and Metrolinx and TTC will coordinate to provide a detour bus service during these closures.

Additionally, James Street, between Queen Street and Albert Street will be closed for utility relocation. The closure is planned between June 2022 and August 2022, coinciding with the first Queen Street closure. During the full closure of James Street, Albert Street, between Bay Street and James Street will be temporarily converted to two-way traffic operations. Currently, James Street operates as one-way northbound and Albert Street operates as one-way westbound. In addition to the six-week full closure, James Street will require four week-long road closures between July 2022 and April 2023. During these week-long full closures of James Street, Albert Street will be temporarily converted to two-way traffic operations.

The TTC 501 Queen streetcar detour enabling work will include installation of additional streetcar tracks on York Street, between Queen Street West and Adelaide Street West and rehabilitation of existing streetcar tracks on Adelaide Street West, between York Street and Church Street. While Metrolinx will complete the installation of streetcar tracks on York Street, the City will complete the rehabilitation of the existing streetcar tracks on Adelaide Street along with other capital works including watermain replacement, major road resurfacing and on-street bikeway reconstruction. The road closures required for installation of the new streetcar track on York Street are listed in Appendix A.

The early works temporary road closures will be implemented under the General Manager, Transportation Services, delegated authority as found in section 937-3.16 of the City of Toronto Municipal Code Chapter 937, Temporary Closing of Highways. This permits the General Manager to temporarily close a highway or portions of highways to vehicular and pedestrian traffic for a period up to and including 365 consecutive days until December 31, 2030, inclusive, as required for the purpose of the construction of the Ontario Line excluding the proposed above ground section of the Ontario Line between Don River and Gerrard Street. Before starting the work, both Metrolinx and the City contractors will provide advance notification to local businesses, community, Ward Councillor and other impacted stakeholders. Prior to issuance of any road occupancy permits City staff will review the traffic control plans to ensure the safety and mobility of all road users and property accesses are maintained. Additionally, coordination with other works in the area will be undertaken to minimize the network-wide traffic impacts.

Station Box Construction

The proposed method of constructing the station box is tunnelling through the bedrock and excavation to a depth of approximately 45 metres from street level to form the

station cavern and create an interface with the existing Line 1 Queen Station. This method will maintain the subway service on Line 1 and provide access to the area under the existing subway station structure. Two excavation pits (approximately 15 metres wide) will be located on Queen Street east and west of Yonge Street. Construction laydown areas will be required adjacent to the excavation pits to support the construction activities. The station box construction by Project Co. is scheduled to start in May 2023.

Major construction activities and associated timelines at the OL Queen Station are listed below:

- May 2023 - Site Setup
- June 2023 to June 2024 - Foundation construction
- November/December 2023 - Temporary protection deck construction for construction vehicles
- June 2024 to August 2025 - Excavation works (approx. 90,000 cubic metres)
- August 2025 to March 2029 - Station works, including station structural works from August 2025 to January 2027; mechanical, electrical and plumbing works from January 2027 to December 2028 and Station Testing and Commissioning from December 2028 to March 2029
- March 2027 to November 2027 - Queen Street reinstated with new pavement and site dismantled, while station works continuing underground.

The deep excavation and construction of the station box in the road right-of-way will require the following long-term temporary road closures on Queen Street, James Street and Victoria Street:

- Full road closure on Queen Street, between Bay Street and Yonge Street and between Yonge Street and Victoria Street from May 1, 2023 to November 30, 2027.
- Full road closure on James Street, between Queen Street West and Albert Street from May 1, 2023, to November 30, 2027.
- Closure of a portion of the east sidewalk on James Street, between Queen Street West and a point 43 metres north, from November 1, 2025, to November 30, 2027.
- Closure of the southbound curb lane on Victoria Street, between a point 41 metres north of Queen Street East and a point 19 metres south of Queen Street East from May 1, 2023, to November 30, 2027.
- Closure of a portion of the south sidewalk on Queen Street East, between Victoria Street and a point 20 metres west from May 1, 2023, to November 30, 2027.
- Closure of a portion of the south sidewalk on Queen Street East, between a point 20 metres west of Victoria Street and a point 31 metres further west for six months starting on May 1, 2023.

With the exception of the south sidewalk closure for six months, all of the above-listed road closures require City Council approval and are shown in Figures 15 and 16.

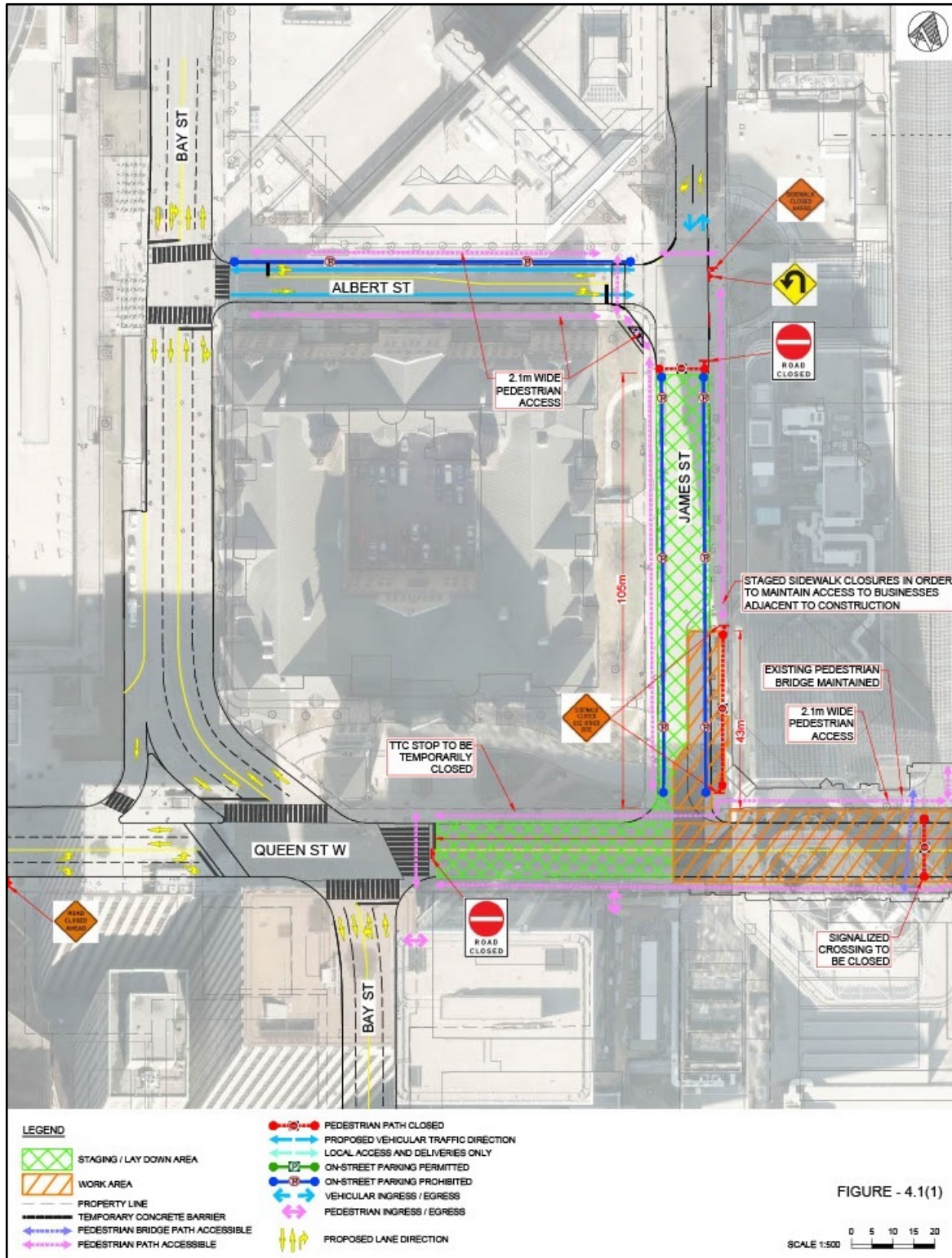


Figure 15 – Ontario Line Queen Station Lane Closures

Source: Metrolinx

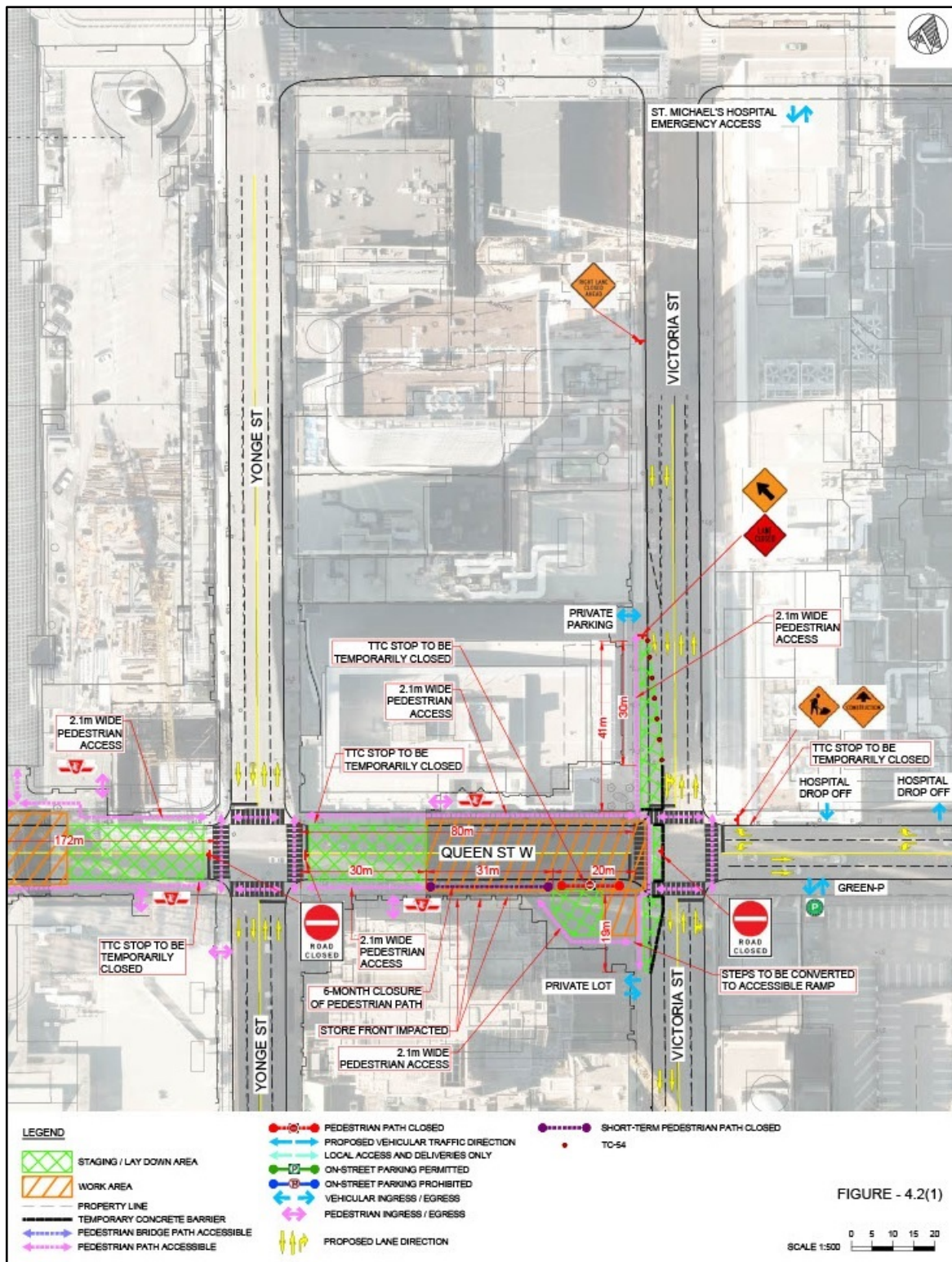


Figure 16 – Ontario Line Queen Station Lane Closures

Source: Metrolinx

In order to try to avoid the full road closure on Queen Street, Metrolinx explored a partial road closure option for construction of the OL Queen Station. The partial road closure option involved temporary closure of two traffic lanes on one side of Queen Street for excavation and construction purposes while shifting the east-west vehicular traffic to the

other side and supporting it with steel plate decking. Similar to the full road closure option, this option maintains pedestrian connectivity on all roads while requiring the full road closure on James Street, the southbound lane closure on Victoria Street and transit detour of the TTC 501 Queen streetcar.

The partial road closure option would further reduce the already constrained work space on Queen Street for the station construction, impact on the available space for pedestrians and would require Queen Street to operate with one way traffic operation for approximately 16 months. Additionally, the partial road closure option will increase the timeline for all construction activities, extending completion of the Queen Station by 12 months. Based on anticipated scheduling, this delay in completion of the Queen Station would delay opening of the overall OL project by up to six months and the prolonged duration of construction will also increase the station construction cost by approximately 228 million dollars.

While a partial road closure would initially appear to offer benefits to road users at the community and commuter level, the longer duration of the partial road closure will result in an additional 12 months of transit detour, community and business impacts.

Taking all of the above into consideration, the partial road closure option overall results in more disruption to the public, community and businesses while also complicating the construction of the Queen Station, increasing costs and increasing the overall construction duration, delaying completion of the overall Ontario line project. For these reasons City staff are not supportive of the partial road closure option and recommend full road closure on Queen Street for construction of the OL Queen Station.

Auto Access Impacts

The full road closure on Queen Street will result in displacement of approximately 1000 vehicles per hour during the weekday a.m. and p.m. peak period. Advanced advisory signage will be installed at the upstream intersections to allow motorists to make appropriate route choices ahead of the closure.

Metrolinx studied traffic impacts of displaced vehicles due to the proposed road closures at the downtown Ontario Line stations of King-Bathurst, Queen-Spadina, Osgoode, Queen, Moss Park and Corktown by using a microsimulation traffic model. The findings of the traffic analysis and cumulative traffic impacts are discussed in the later sections of this report.

James Street, between Queen Street West and Albert Street, will be temporarily closed to all vehicular traffic to accommodate construction of the vent shaft, emergency access and laydown area. The full closure of James Street will prevent vehicular access to properties along Albert Street, which currently operates as one-way westbound. Therefore, Albert Street will be converted to a two-way traffic operation during the closure of James Street to enable property access to be maintained.

Road closure on James Street will result in removal of approximately 19 "Pay and Display" parking spaces on both sides and two taxi cab stand spaces on the west side of James Street. The two-way traffic operation on Albert Street will result in removal of

approximately 8 "Pay and Display" parking spaces and three taxi cab stand spaces on the north side of Albert Street. The Green P parking lot at City Hall and other nearby public parking facilities could accommodate the on-street parking from Albert Street and James Street. Additionally, the Project Co. will be responsible for paying Toronto Parking Authority for the lost revenue from the parking spaces on James Street and Albert Street. The accessible loading zone on the south side of Albert Street at Bay Street will be maintained.

Metrolinx assessed vehicular turning manoeuvres at James Street and Albert Street to ensure vehicles, specifically Wheel-Trans vehicles, could complete turning manoeuvres without any conflict. The assessment indicates that temporary modifications to the roadway curb and sidewalk in the southwest corner of the intersection will be required.

The closure of the southbound curb lane on Victoria Street at Queen Street West will be required for construction of the vent shaft and construction staging purposes. With the lane closure in place, Victoria Street at Queen Street East will operate as one lane southbound and two lanes northbound. All parking garage and delivery accesses to the neighbouring properties will be maintained.

Transit Impacts

The road closures on Queen Street and construction of the OL Queen Station will not impact the subway service on the TTC Line 1 Yonge-University, however, the TTC 501 Queen streetcar will require a detour.

Metrolinx and TTC have evaluated various detour options and determined the preferred option by using Richmond Street and Adelaide Street as east-west detours along the affected area on Queen Street. Figure 17 below shows the proposed detour route of the TTC 501 Queen streetcar for the duration of the Queen Street road closure.

The westbound streetcar detour, as shown in the Figure 17, can be readily accommodated as all the detour roads are equipped with streetcar tracks and track switches. However, the eastbound streetcar detour will require the installation of additional streetcar tracks on York Street, between Queen Street West and Adelaide Street West, and track switches at Queen Street West and Adelaide Street West to enable turning manoeuvres.

The new dedicated southbound streetcar track will be installed in the westerly median lane beside the existing tracks on York Street, between Queen Street West and Adelaide Street West. In addition, City staff worked with Metrolinx to include installation of a southbound cycle track on York Street between Richmond Street West and King Street West to provide a detour for cyclists during the full road closure on Queen Street.

Figure 18 shows the recommended reconfiguration of York Street. between Queen Street West and Richmond Street West, the northbound streetcar track will continue to operate in mixed traffic. The southbound streetcar track will be a dedicated streetcar lane.

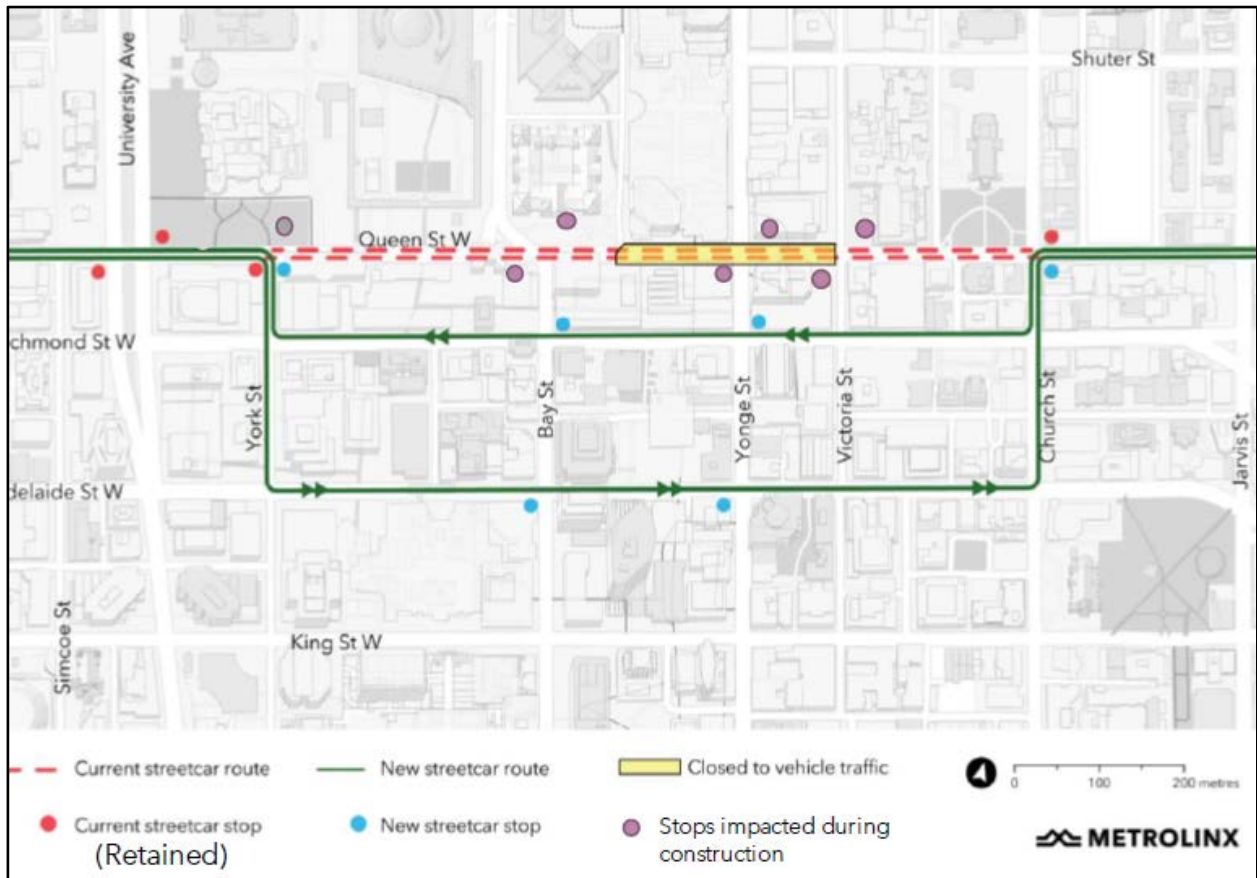


Figure 17 – TTC 501 Queen Streetcar Detour

Source: Metrolinx

The existing southbound traffic lane will be maintained to provide vehicular access to the underground parking lot of the Canadian Opera Company and the National Ballet of Canada building. In addition, shared lane markings will be installed for southbound bicyclists.

Between Richmond Street West and King Street West, York Street will be reconfigured to accommodate a southbound cycle track up to King Street West and a southbound streetcar track up to Adelaide Street West. Three on-street parking spaces on the west side of York Street, between Richmond Street West and Adelaide Street West will be removed and seven on-street parking spaces on the west side of York Street, between Adelaide Street West and King Street West will be maintained. The loss of on-street parking supply can be readily offset by nearby underground public parking lots and financial loss from the three removed parking spaces is expected to be offset by longer availability of seven parking spaces during the weekday peak hours.

The infrastructure improvements on York Street, between Queen Street West and King Street West will be designed and implemented by Metrolinx as part of the OL Queen Station Early Works.

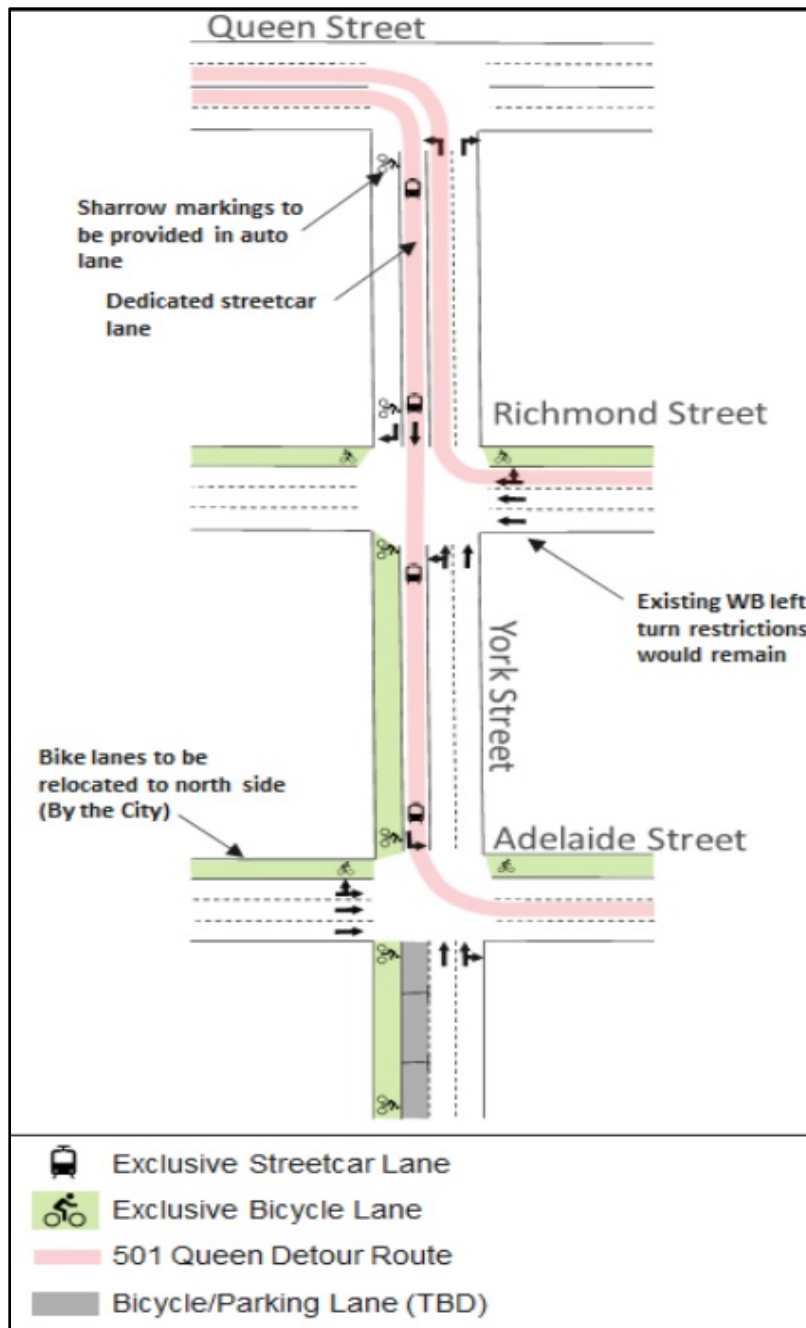


Figure 18 – York Street Reconfiguration

Source: Metrolinx

In addition, the City will rehabilitate the streetcar tracks on Adelaide Street, between York Street and Church Street, as part of the City Capital Works along with other infrastructure improvements including watermain replacement, major road resurfacing and on-street bikeway reconstruction. The parties intend to complete the construction of the York Street scope of work and the accelerated components of the City's Adelaide Street work will need to be completed prior to the planned Queen Street full closure. Typically, roles and responsibilities for the planning and implementation of work required for a Metrolinx project would be defined in a tri-party master agreement.

City, TTC, and Metrolinx staff are currently engaged in negotiations with the Province on a Subway Program Term Sheet, and are also finalizing negotiations of a Subways Real Estate Protocol with Metrolinx. A Master Agreement for the Subways Program is expected to include many of the terms in the Real Estate Protocol but negotiations for the Master Agreement are not anticipated to conclude prior to the March 2022 construction-start of the capital works required to support the Queen Street Road Closure. In the interim, the City will need to secure an expedited agreement with Metrolinx prior to construction start. As such, this report recommends that City Council authorize the Deputy City Manager, Infrastructure and Development Services, working in consultation with the Chief Capital Officer, TTC, to negotiate and enter into any necessary agreements with Metrolinx, that reflects the roles and responsibilities articulated below:

Metrolinx will be responsible for:

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

The City will be responsible for:

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

The TTC will be responsible for:

- Designing, procuring, and installing TTC infrastructure (excluding concrete) associated with York Street and Adelaide Street streetcar tracks;
- Isolating and decommissioning streetcar OCS on Queen Street between Victoria Street and York Street and reinstatement after restoration;
- Maintaining and operating TTC infrastructure on York Street and Adelaide Street, once accepted by the TTC;
- Restoration of OCS upon completion of both York and Adelaide;
- Ownership and maintenance of TTC infrastructure associated with the Work; and

- Planning, coordinating and providing replacement bus bridging in the event the Adelaide Street and York Street TTC track work is not completed at the time of the Closure.

Metrolinx will fund and deliver the York Street modifications. Metrolinx has also agreed in principle to be responsible for all costs associated with the establishment of the 501 streetcar detour and to reimburse the City for incremental costs to the City's Adelaide Reconstruction Project.

The streetcar detour will remain operational during the Queen Street closure and could be utilized by TTC as a transit detour during any future closure of Queen Street. The streetcar detour of the TTC Queen 501 streetcar will potentially impact several transit stops. TTC staff are currently in discussion with Metrolinx to determine the exact relocations of the impacted transit stops.

Pedestrian Impacts

Pedestrian connectivity along all roads will be maintained during the temporary road closure on Queen Street, James Street and Victoria Street. A portion of the south sidewalk on Queen Street East, between Victoria Street and a point 20 metres west will be closed for up to 4.5 years. However, as shown in Figure 16, a 2.1 metres wide pedestrian walkway will be provided on the privately-owned publicly accessible plaza space belonging to 1 Queen Street East building. Additionally, a portion of the south sidewalk on Queen Street East, between a point 20 metres west of Victoria Street and a point 31 metres further west, will be closed for up to six months to facilitate piling and shoring operation. An alternative accessible pedestrian walkway through 1 Queen Street East building will be available to pedestrians. Metrolinx will coordinate with the property owner to ensure pedestrian detours remain available during the sidewalk closure.

Furthermore, a portion of the east sidewalk on James Street, between Queen Street West and a point 43 metres north, will be closed for up to two years to facilitate construction of the vent shaft and emergency exit. Alternative north-south pedestrian connection on the west sidewalk on James Street, between Queen Street West and Albert Street will be maintained at all times.

The existing signalized pedestrian crossing on Queen Street West, connecting Eaton Centre and The Bay will be closed. However, the pedestrian bridge connecting these retail facilities will remain available. Furthermore, pedestrian access to all TTC subway entrances will remain available.

The site set up, signage and maintenance of temporary routes around work zones will ensure pedestrian safety, including keeping them free of any debris, loose material and snow and ice.

Access to the PATH network will be maintained during regular Line 1 Station operations. However, weekend and overnight closures are expected at 1 Queen Street East, 2 Queen Street East and TTC Concourse between Eaton Centre and Hudson's

Bay. Additionally, parts of the PATH may require temporary width reduction to allow for sufficient construction work space.

Cycling Impacts

Queen Street is a popular bike route although it has no dedicated cycling infrastructure and it is parallel to the City's major east-west dedicated and segregated bikeways on the Richmond Street and Adelaide Street corridors. With the proposed long-term full closure of Queen Street, between Bay Street and Yonge Street and between Yonge Street and Victoria Street, Queen Street will not be available for cyclists as a thoroughfare during OL construction. To mitigate this, as noted earlier in the report, as part of the recommended two-way conversion of York Street, a southbound cycle track will be installed on York Street between Richmond Street West and King Street West, to provide a detour to cyclists by connecting Queen Street to major bikeways on Richmond Street and Adelaide Street and provide connectivity to King Street.

Emergency Vehicles Impact

Metrolinx evaluated the impacts of the Queen Street road closure on routing of emergency vehicles. Based on Metrolinx's assessment, typical distance and travel time for fire trucks from Fire Station 332 to access the area near Queen Street and Victoria Street is one kilometre and 4 minutes. Due to the Closure, the trucks will travel an additional distance of 0.3 kilometre to access the area east of the closure, which will increase the travel time by a minute. The Closure will not impact the routing of fire trucks from the Fire Station 333. Figure 19 below shows the fire truck travel time to destinations near the Queen Street closure.

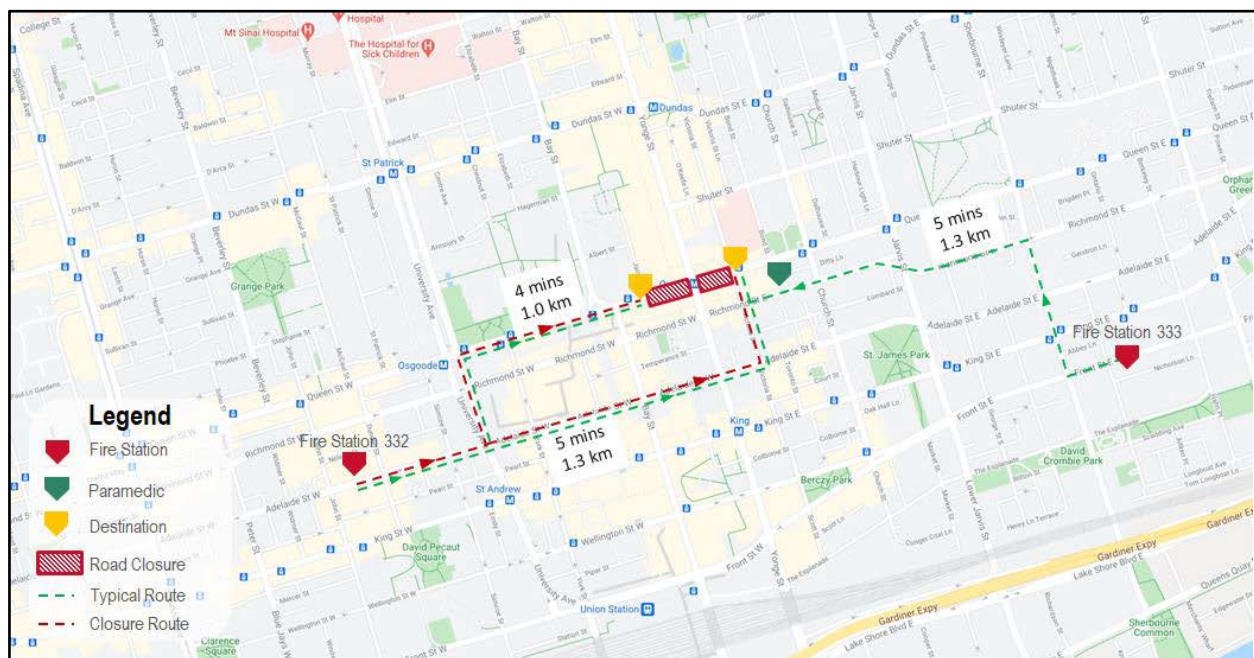


Figure 19 – Fire Truck Access and Travel Time

Source: Metrolinx

Toronto Paramedics Services Station 40, located at 58 Richmond Street East, is the closest station for paramedic services in the Queen Street road closure area and there Ontario Line Downtown Stations - Temporary Road Closures and Community Impacts

will be some impact to the paramedic vehicle routing to destinations in the Queen Street closure area. Figure 20 and 21 below show paramedics vehicle routing and travel time from the station 40 and St. Michael's Hospital. The response distance and time from St. Michael's Hospital to the western end of the Queen Street road closure is slightly increased by up to 0.4 km and 1 minute, respectively.

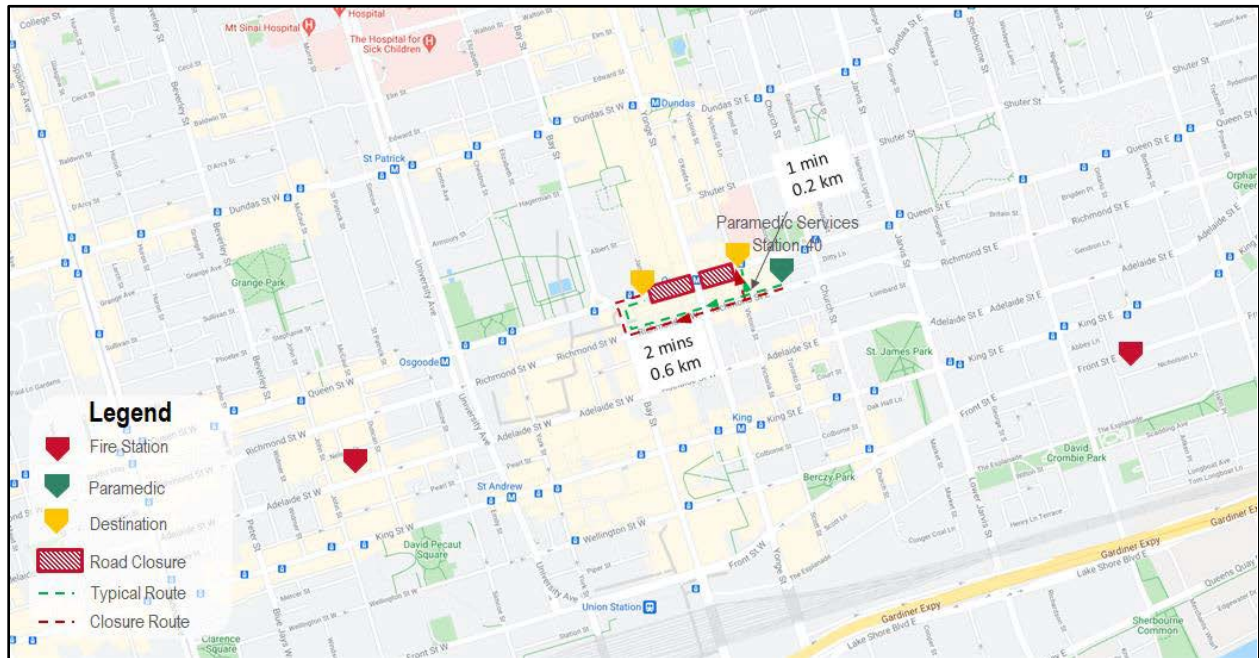


Figure 20 – Toronto Paramedics Vehicle Access and Travel Time from Station 40

Source: Metrolinx

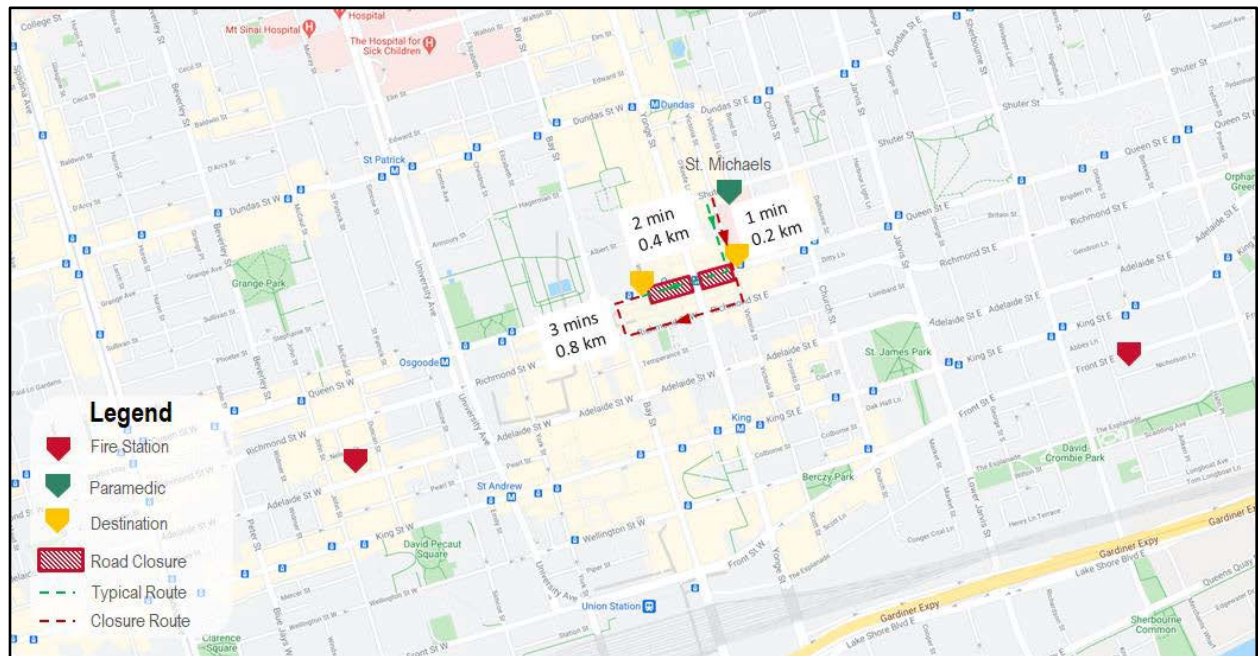


Figure 21 – Toronto Paramedics Vehicle Access and Travel Time from St. Michaels Hospital

Source: Metrolinx

Business Access Impacts

All business accesses will be maintained during the OL Queen Station construction. The closure of the south sidewalk on Queen Street East between 30 metres east of Yonge Street and Victoria Street will impact street storefront access for up to six months. However, alternative access to these stores will be available from 1 Queen Street East building. Metrolinx will coordinate with the impacted businesses and property owner of 1 Queen Street East to ensure alternative accesses are maintained.

Haul Routes

Metrolinx estimates that the station excavation will produce approximately 90,000 cubic metres of spoils. Additionally, multiple truck deliveries of concrete, reinforced steel and station fitting material will be required during the station construction stage. The station excavation and construction stages are estimated to generate approximately 20 trucks trips per day. Figures 22 and 23 show the potential inbound and outbound haul routes to the OL Queen Station. These routes will be confirmed and refined when the Project Co. joins the project.

The construction trucks arriving from the west will utilize Bay Street and Albert Street to access the construction staging area on James Street. A traffic control person at James Street and Albert Street and a paid duty officer at Queen Street West and Bay Street will be stationed to facilitate safe movements of the trucks. The trucks leaving the James Street construction staging area will utilize Albert Street and Bay Street to access the Gardiner Expressway.

The trucks accessing the work sites from Yonge Street will utilize Bay Street northbound and Adelaide Street to connect to Yonge Street. A paid duty officer will be stationed at the intersection of Yonge Street and Queen Street to facilitate safe movements of trucks in and out of the work sites. The trucks leaving the work site from Yonge Street will continue southbound to connect with the Gardiner Expressway.

The trucks arriving from the west and accessing the Victoria Street laydown area will utilize Bay Street Northbound to Dundas Street Eastbound to connect to Victoria Street Southbound. The trucks leaving the Victoria Street laydown area will travel on Victoria Street Southbound and connect with Adelaide Street Eastbound and Jarvis Street Southbound to access the Gardiner Expressway.

The trucks arriving from the east will utilize Richmond Street Westbound to connect to Yonge Street and Bay Street. Additionally, the trucks arriving from the east will access the Victoria Street laydown area by utilizing Richmond Street Westbound to connect to Jarvis Street Northbound and Shuter Street Westbound to access Victoria Street. The trucks leaving the work sites will utilize Adelaide Street to access the Don Valley Parkway.

Trucks will enter and exit the work sites in a forward motion and traffic control persons will be positioned at the site access and egress to prevent any conflict between the construction vehicles and pedestrians. Site hoarding and staging area will be designed to ensure clear sight lines are available for both pedestrians and truck drivers. The

Project Co. will ensure the work zone is well lit to provide full visibility of pedestrians to the truck drivers.

City staff and Metrolinx are acutely aware that increased truck traffic on the haul routes potentially poses increased risk to pedestrians and cyclists. City staff will work with Metrolinx and Project Co. to implement strategies to ensure Vision Zero principles are followed and these potential risks are minimised.

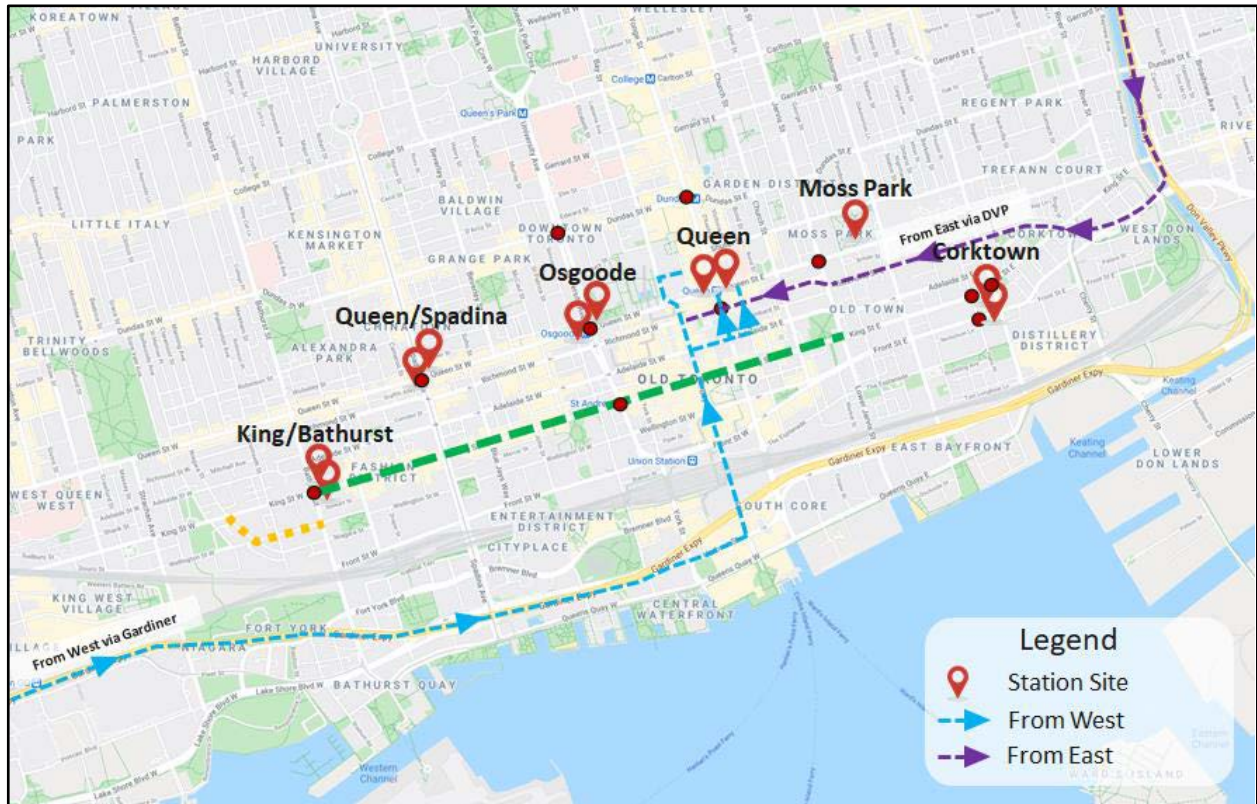


Figure 22 – Potential Inbound Haul Routes for OL Queen Station

Source: Metrolinx

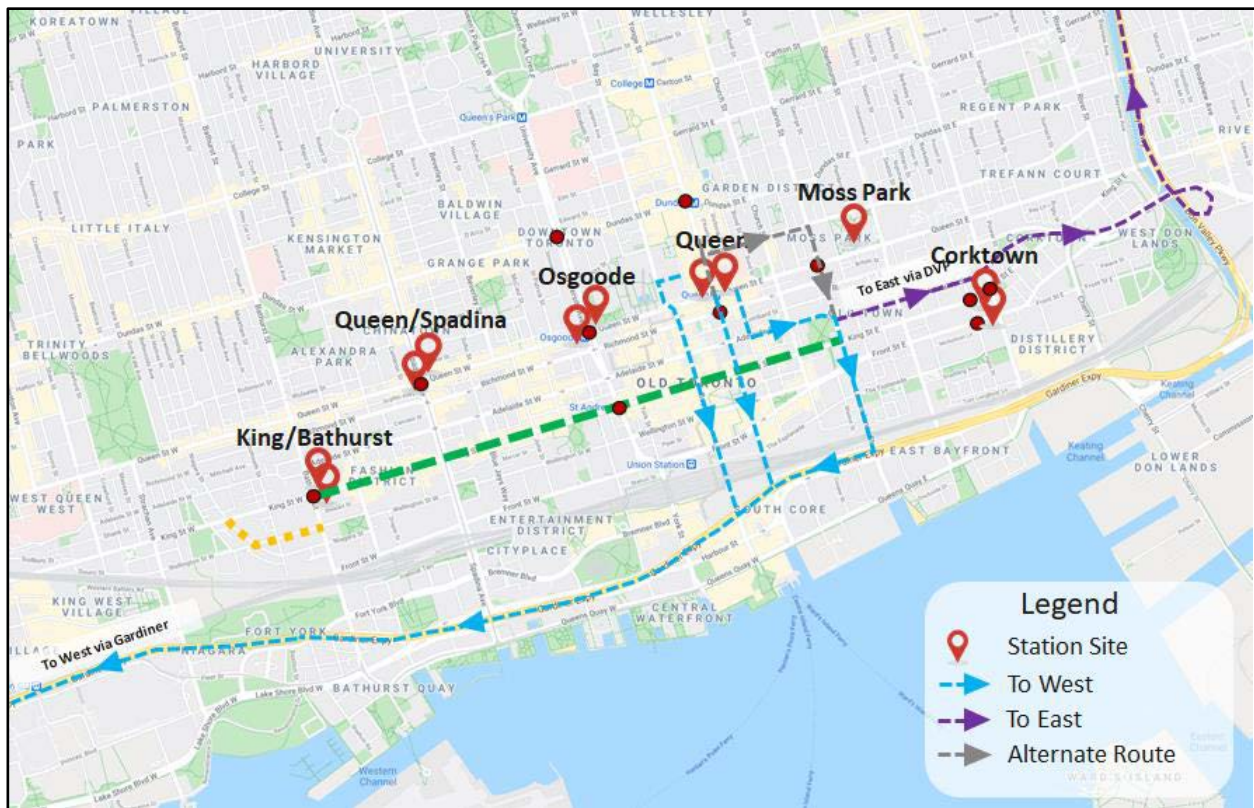


Figure 23 – Potential Outbound Haul Routes for Queen Station

Source: Metrolinx

Moss Park Station

The OL Moss Park Station will be located in Moss Park in the north-west quadrant of Queen Street East and Sherbourne Street. The Station, when open, will provide connection to the TTC 501 Queen Streetcar and bus transit routes. Figure 24 shows the location of the Station.

The OL tunnel will pass under the southern edge of the park. The station box will be constructed above the tunnel location and the station entrance will be in the southeast corner of the park.

Major construction activities at the Station will consist of the following:

- July 2023 to October 2025 - Excavation Cut and Cover
- November 2025 to May 2027 - Station main concrete work
- Fall 2026 to Fall 2027 - Exterior Station Works (including roadway restoration)
- May 2027 to May 2028 - Interior station structure, mechanical, electrical and plumbing work
- February 2028 to February 2029 - Station fit out and testing (escalators, elevators etc.)
- April 2029 to November 2029 - Reopening of lane closure and public ROW

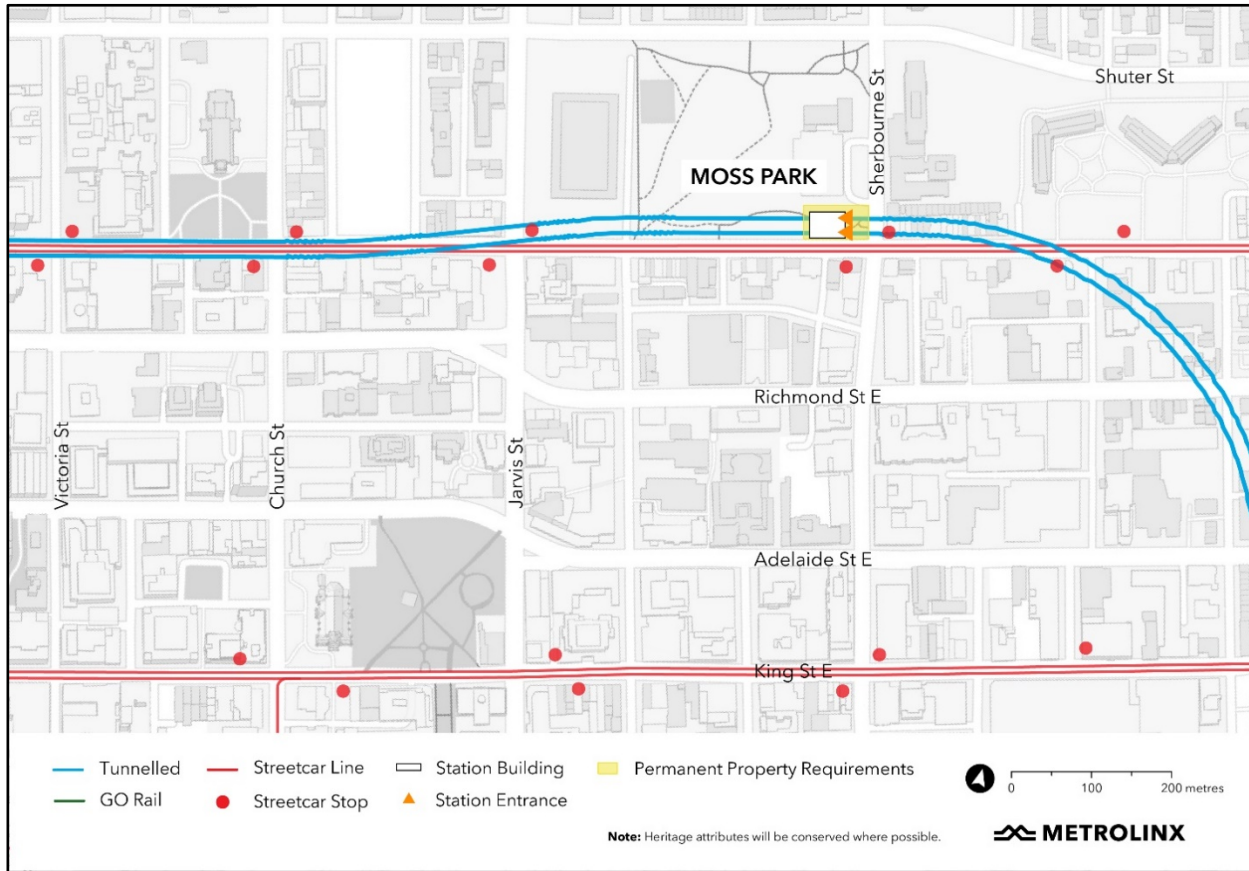


Figure 24 – Ontario Line Moss Park Station

Source: Metrolinx

The Project Co. will carry out construction staging operations from a temporary construction staging area in the park's northwest quadrant. This staging area will accommodate construction equipment, material and worker facilities over the multi-year construction of the Station.

Based on Metrolinx's estimates, up to 20 trucks per day are expected at the site during each of the station excavation and construction stages, to haul excavated spoils and deliver construction material. Frequent truck deliveries at the site will require a safe and controlled space adjacent to the station box construction to ease loading and unloading operation and minimize conflicts with the road users, specifically pedestrians. Metrolinx has assessed the park construction staging area to accommodate the truck loading/unloading space. However, it was not considered feasible due to a lack of sufficient available space. Furthermore, the construction trucks would need to enter the park from Queen Street East and leave on Shuter Street, thus affecting a larger area of the park and Shuter Street, which has limited road width and bike lanes. Consequently, occupation of the road right-of-way on Queen Street East adjacent to the station box construction is necessary.

The westbound curb lane and sidewalk on the north side of Queen Street East, between Sherbourne Street and George Street will be closed to accommodate construction

staging operations for the site. Pedestrians will be directed to a 2.1 metres protected walkway within the closed portion of the westbound lane. Pedestrian operations on the south side of Queen Street East will remain unchanged.

Figure 25 shows the above-discussed lane closure. The lane closure impacts are discussed below:

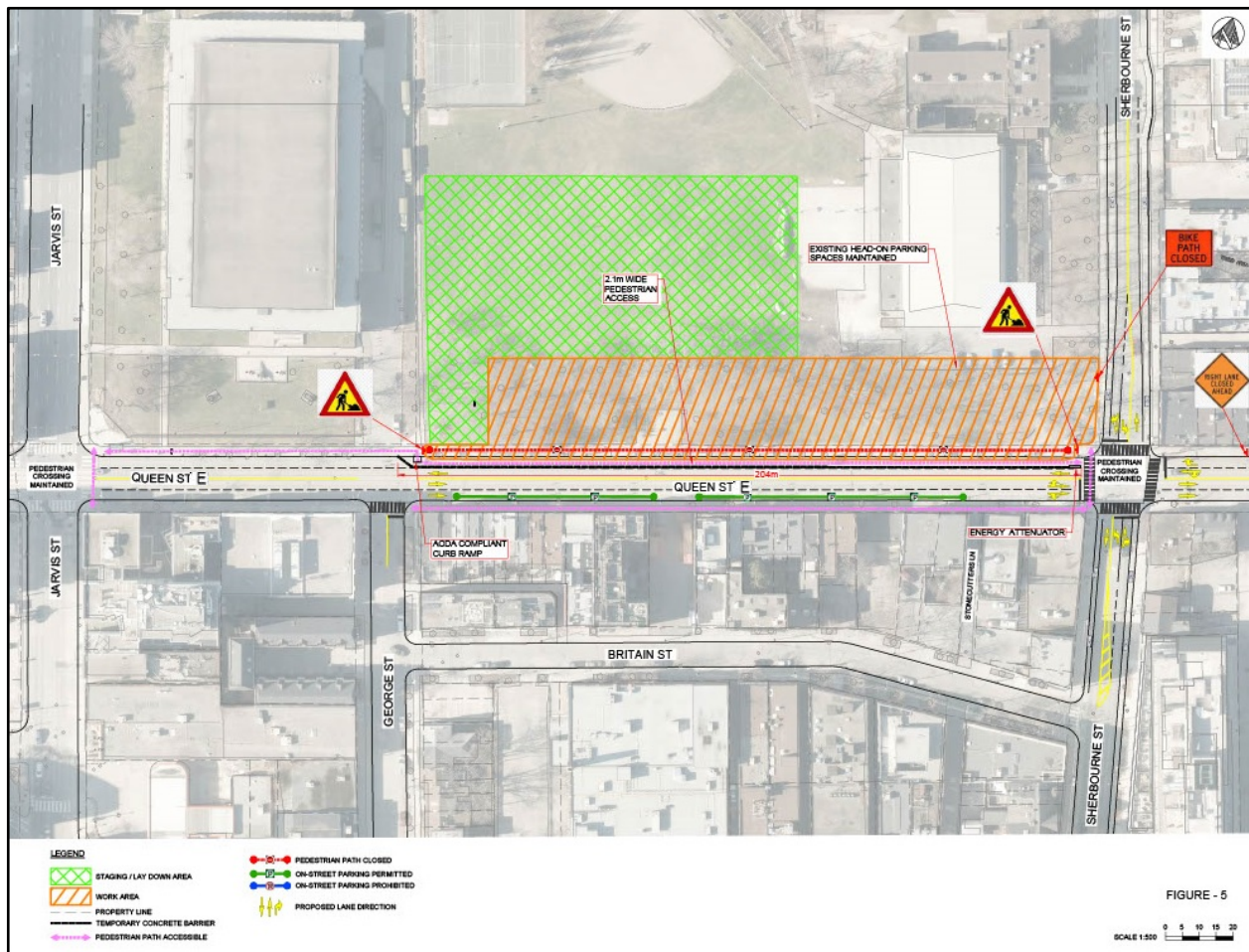


Figure 25 – Ontario Line Moss Park Station Lane Closures

Source - Metrolinx

Auto Access Impacts

With the closure of the westbound curb lane in place, Queen Street East, in the immediate vicinity of the site, will operate as two eastbound lanes and one westbound lane. The westbound lane will be shared by the TTC 501 Queen streetcar and general traffic. All auto accesses will be maintained.

The construction staging area on Queen Street East will result in removal of approximately 25 on-street "Pay and Display" parking spaces located on the north side of Queen Street East, between Sherbourne Street and George Street. The Project Co. will be responsible for paying Toronto Parking Authority the lost revenue from the parking spaces on Queen Street East.

Pedestrian Impacts

Pedestrian movements on the north side of Queen Street East, between Sherbourne Street and George Street, will be maintained in a protected 2.1 metres wide pedestrian walkway in the closed portion of the westbound curb lane. The pedestrian movements on the south side of Queen Street East will remain unaffected.

The site set up, signage and maintenance of temporary routes around work zones will ensure pedestrian safety, including keeping them free of any debris, loose material and snow and ice.

Cycling Impacts

There are currently no dedicated bike lanes on Queen Street East. Bicyclists will continue to share the eastbound and westbound travel lanes with the general traffic.

Transit Impacts

There will be no impact on the TTC 501 Queen streetcar service. In addition, there will no impact on existing transit stops. A minimum one metre wide safety setback from the TTC streetcar track allowance will be maintained.

Emergency Vehicle Impact

The westbound curb lane closure on Queen Street East will not require detour of emergency vehicles.

Business Access Impact

All business accesses will be maintained during construction.

Haul Routes

Metrolinx estimates that the station excavation will produce approximately 80,000 cubic metres of spoils, and that the excavation and construction will generate up to 20 truck trips per day. Figures 26 and 27 show the potential inbound and outbound haul routes to the OL Moss Park Station. These routes will be confirmed and refined when the Project Co. joins the project.

The construction trucks arriving from the west will enter the site via a westbound right-turn movement from Queen Street West, which will be accommodated via Jarvis Street, Dundas Street and Sherbourne Street. The trucks arriving from the east will utilize Richmond Street and Sherbourne Street to access the work site.

The trucks exiting the work site will travel westbound on Queen Street East and connect to George Street Southbound to access Adelaide Street for the eastbound vehicles and Jarvis Street for the westbound vehicles. Currently, the westbound left-turn movements at the intersection of Queen Street East and Jarvis Street are prohibited during the

weekday a.m. and p.m. peak hours. This restriction may need to be re-examined once the Project Co. submits their haul route proposals for consideration.

City staff and Metrolinx are acutely aware that increased truck traffic on the haul routes potentially poses increased risk to pedestrians and cyclists. City staff will work with Metrolinx and Project Co. to implement strategies to ensure Vision Zero principles are followed and how these potential risks are minimised.

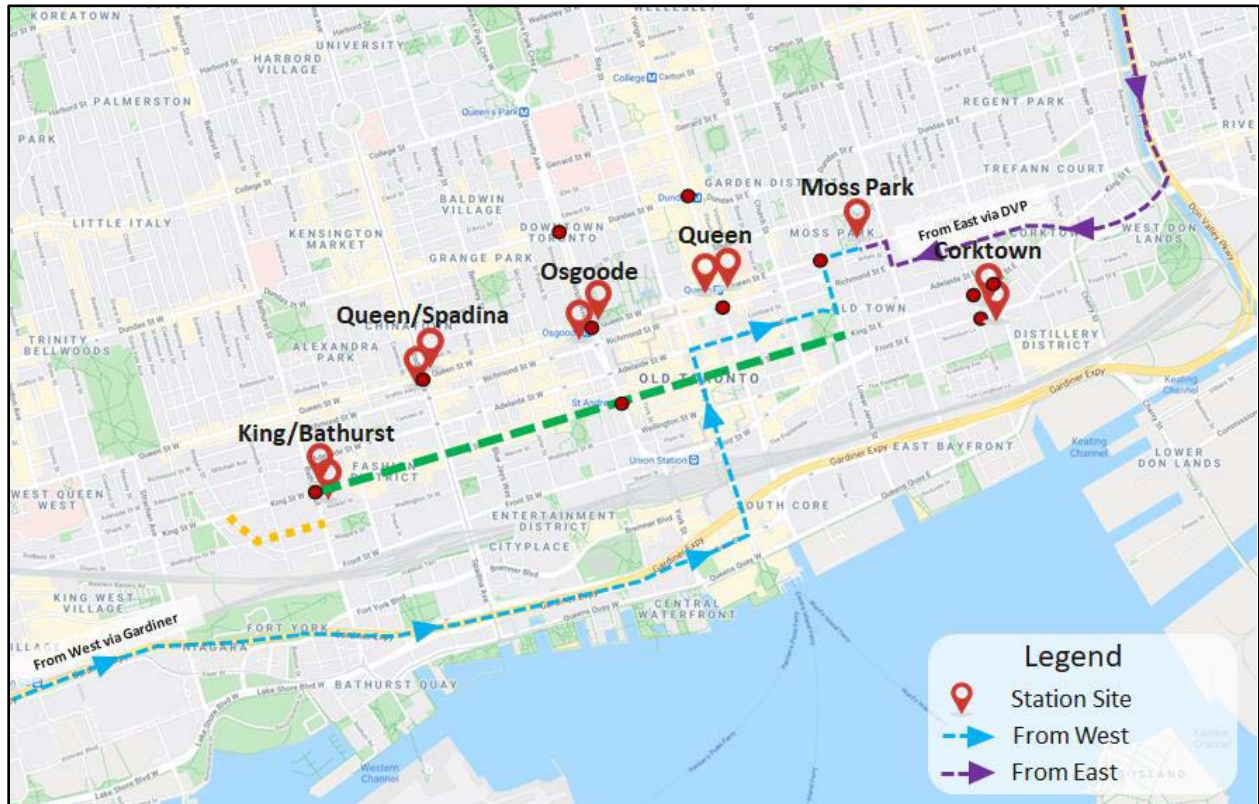


Figure 26 – Potential Inbound Haul Routes for OL Moss Park Station

Source: Metrolinx

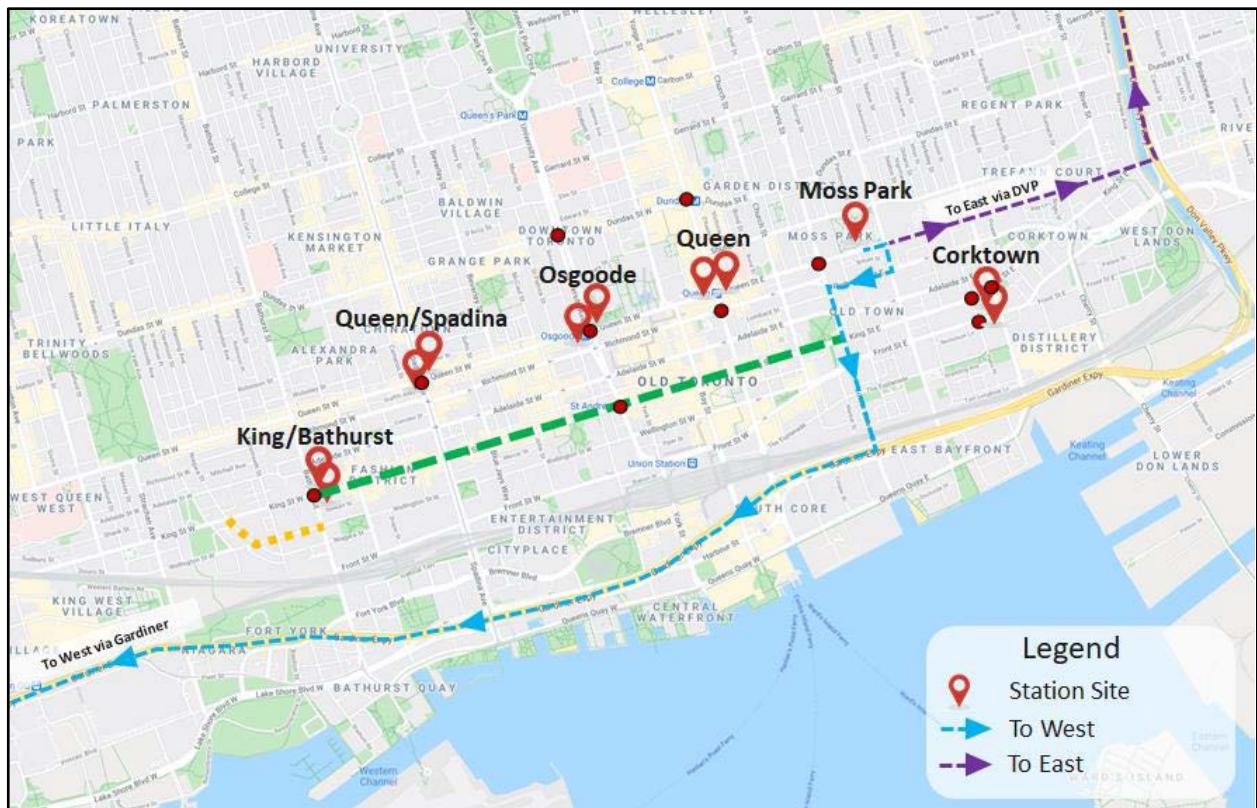


Figure 27 – Potential Outbound Haul Routes for OL Moss Park Station

Source: Metrolinx

Corktown Station

The lands in the south-east quadrant of King Street East and Berkeley Street will accommodate the future OL Corktown Station. Figure 28 shows the location of the Station, which will provide a connection to the TTC King 504 streetcar and bus transit service.

Early Works

Enbridge gas infrastructure relocation will require temporary road closures in the vicinity of the OL Corktown Station. The notable temporary road closures are listed below and detailed in Appendix A.

- Closure of the westbound curb lane on Front Street East, between Parliament Street and Berkeley Street from October 1, 2022 to November 30, 2022;
- An overnight closure of Berkeley Street just north of King Street East; and
- Closure of the eastbound curb lane and south sidewalk on King Street East just east of Berkeley Street for three weeks from October 1, 2022 to November 30, 2022. A temporary pedestrian walkway will be established in the closed portion of the eastbound curb lane.

The above-listed temporary road closures will be implemented under the General Manager, Transportation Services, delegated authority as found in section 937-3.16 of the City of Toronto Municipal Code Chapter 937, Temporary Closing of Highways. This

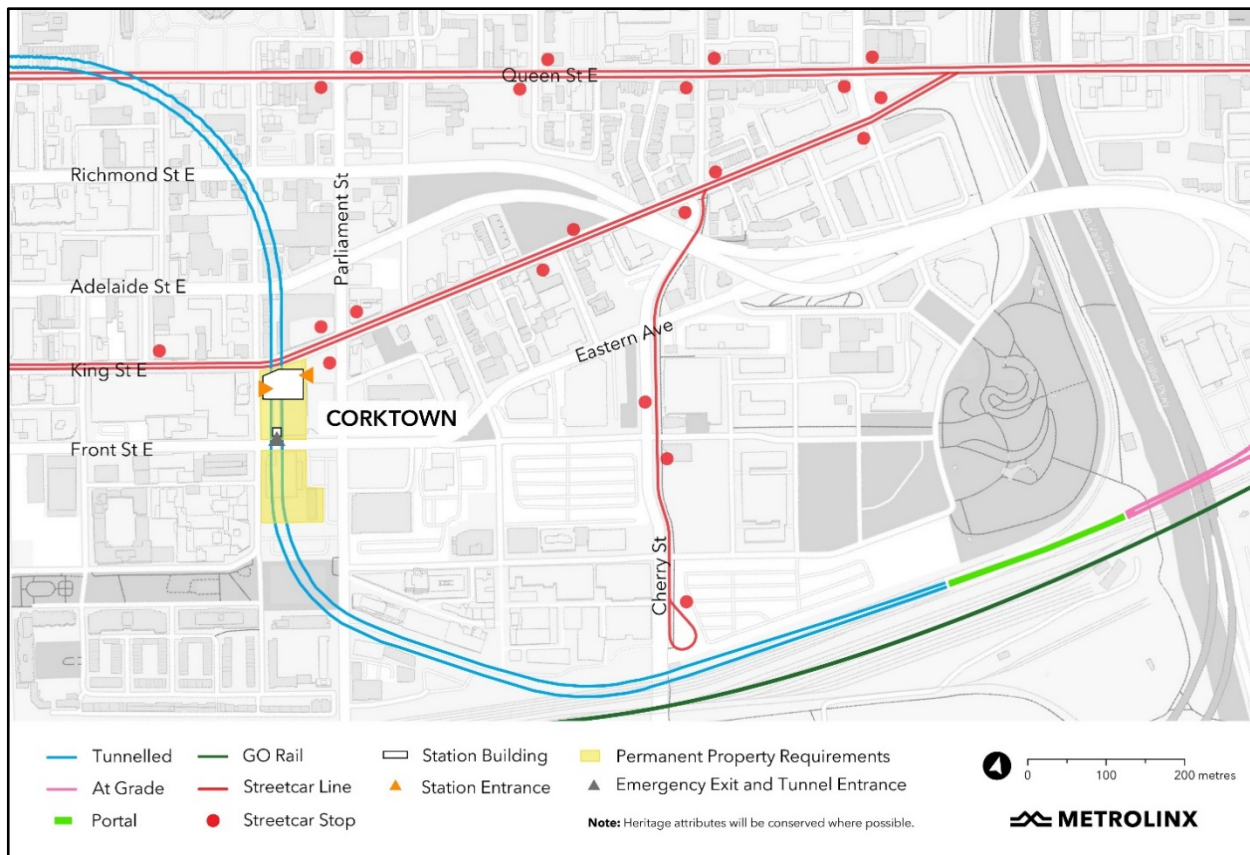


Figure 28 – Ontario Line Corktown Station

Source: Metrolinx

permits the General Manager to temporarily close a highway or portions of highways to vehicular and pedestrian traffic for a period up to and including 365 consecutive days until December 31, 2030, inclusive, as required for the purpose of the construction of the Ontario Line excluding the proposed above ground section of the Ontario Line between Don River and Gerrard Street. Before starting the work, Metrolinx and its contractor will provide advance notification to local businesses, community, Ward Councillor and other impacted stakeholders. Prior to the issuance of road occupancy permits City staff will review the traffic control plans to ensure the safety and mobility of all road users and property accesses are maintained. Additionally, coordination with other works in the area will be undertaken to minimize the network-wide traffic impacts.

Station Construction

The OL tracks at the Corktown Station will be tunnelled and station construction will employ the cut and cover method. The station construction will span over two city blocks. The North Site bounded by King Street East, Parliament Street, Front Street East and Berkeley Street, will house the future station building and tunnel boring machine (TBM) launch site to tunnel the downtown segments of the Line. The South site bounded by Front Street East, Parliament Street, existing Park and Berkeley Street, will house the construction staging operations.

Major construction activities at the Station will consist of the following:

- Present to December 2022 - Demolition of existing buildings on the North and South Sites
- July 2022 to November 2023 - Utility relocation and site setup
- September 2022 to June 2023 - Enabling works
- July 2023 to October 2025 - Excavation Cut and Cover
- November 2025 to May 2027 - Station main concrete work
- Fall 2026 to Fall 2027 - Exterior station work including roadway restoration
- May 2027 to May 2028 - Interior station structure, mechanical, electrical and plumbing work
- February 2028 to February 2029 - Station fit out and testing (escalators, elevators etc.)
- April 2029 to November 2029 - Reopening of lane closures and public ROW

The following long-term temporary road closures are required for the station construction:

- The south sidewalk on King Street East, between Berkeley Street and a point 30 metres west of Parliament Street, will be temporarily closed from September 1, 2022 to November 30, 2029.
- The eastbound curb lane on King Street East, between Berkeley Street and a point 30 metres west of Parliament Street, will be temporarily closed from September 1, 2022 to November 30, 2029. A temporary 2.1 metres wide pedestrian walkway will be provided within the closed portion of the eastbound curb lane, from October 1, 2024 to March 31, 2029.
- The west sidewalk on Parliament Street, between a point 30 metres south of Parliament Street and a point 44 metres further south, will be closed from September 1, 2022 to November 30, 2029.
- The southbound curb lane on Parliament Street, between a point 5 metres south of King Street East and a point 5 metres north of Front Street East, will be closed from September 1, 2022 to November 30, 2029. A temporary 2.1 metres wide pedestrian walkway will be provided within the closed portion of the southbound curb lane.

City staff and the Metrolinx project team held multiple discussions on minimizing the number and duration of lane occupations at the OL Corktown Station. The original road closure proposal included sidewalk closures on King Street East, Parliament Street, Front Street East and Berkeley Street abutting the site and the southbound lane closure on Parliament Street, between Front Street East and Mill Street. Additionally, the duration of the south sidewalk closure on King Street East, between Berkeley Street and Parliament Street, has been shortened from the initially proposed duration of 5 years to 2 years.

As mentioned earlier, the North Site will accommodate both the station building construction and TBM launch site. A portion of the station building is below King Street East and the eastbound curb lane closure on King Street East abutting the North Site is required to facilitate construction of the station box below King Street East. Additionally, deep station excavation and resultant excavated muck will generate approximately 20 trucks per day and the construction stage around 20 trucks per day. Furthermore, the tunnelling operations at the OL Corktown Station will generate approximately 70 trucks

per day. A safe and controlled area adjacent to the station construction and TBM launch site is required to accommodate frequent truck deliveries and avoid conflicts with the road users, especially pedestrians. Therefore, occupation of the road right-of-way on King Street East and Parliament Street is required to support construction activities and accommodate multiple construction trucks at the site.

Trucks with construction material deliveries will be accommodated within the South Site, resulting in no sidewalk or lane occupation.

The lane closures are shown in Figure 29 and impacts are discussed below:

Auto Access Impacts

The closure of the eastbound curb lane on King Street East, between Berkeley Street and a point 30 metres west of Parliament Street, will result in one eastbound and two westbound traffic lanes on King Street East within the closure limits.

The closure of the westbound curb lane on Parliament Street, between a point 30 metres south of King Street East and a point 44 metres further south, will result in one southbound lane and two northbound lanes on Parliament Street within the closure limits.

All auto accesses will be maintained with no detours required.

Pedestrian Impacts

Pedestrian connectivity on the south side of King Street East, between Berkeley Street and a point 64 metres east, will not be available from September 1, 2022, to September 30, 2024. However, pedestrians will be able to safely cross the roadway at both Berkeley Street and Parliament Street as traffic control signals control their intersection with King Street East. Appropriate advanced signage will be positioned at strategic locations to ensure pedestrians are informed of this temporary sidewalk closure. In addition, warning signage will be posted at the signalized intersections of King Street East at Berkeley Street and Parliament Street.

From October 1, 2024 till November 30, 2029, pedestrian connectivity will be restored by implementing a temporary 2.1 metres wide pedestrian walkway in the closed portion of the eastbound curb lane on King Street, between Berkeley Street and a point 30 metres west of Parliament Street.

A temporary 2.1 metres wide pedestrian walkway will be provided in the closed portion of the southbound curb lane to maintain pedestrian connectivity on the west side of Parliament Street. The east sidewalk on Parliament Street will be maintained.

The site set up, signage and maintenance of temporary routes around work zones will ensure pedestrian safety, including keeping them free of any debris, loose material and snow and ice.

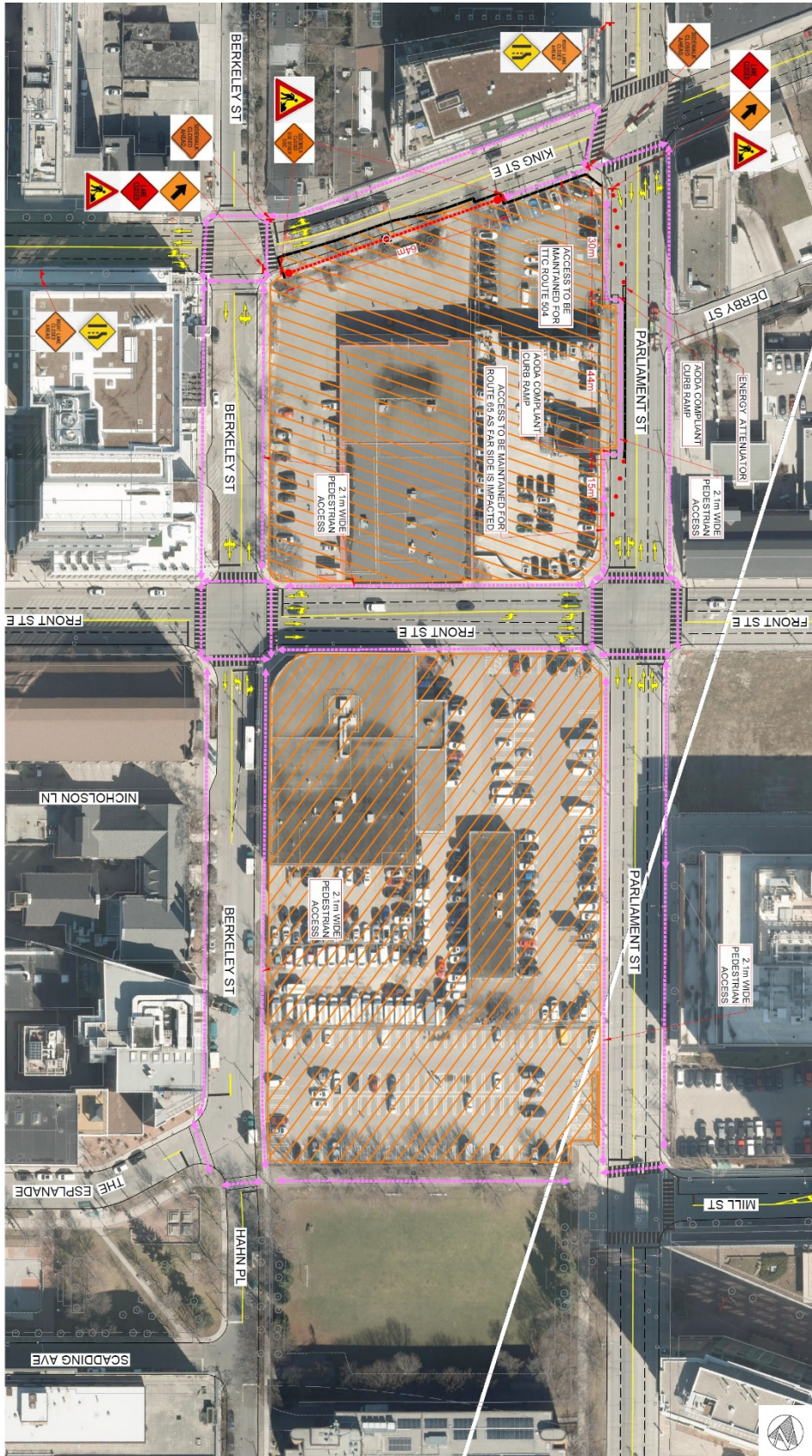


Figure 29 – Ontario Line Corktown Station Lane Closures

Source: Metrolinx

Cycling Impacts

There are currently no dedicated bike lanes on King Street East. Bicyclists will continue to share the eastbound and westbound travel lanes with the general traffic.

Parliament Street, in the vicinity of the site, also does not have dedicated bike lanes. Bicyclists will continue to share the northbound and southbound travel lanes with the general traffic.

The City installed a dedicated cycling connection between The Esplanade and Mill Street in October 2021, which will not be impacted by the construction at the OL Corktown Station.

Transit Impacts

There will be no impact on the TTC 504 King streetcar service and bus transit routes. In addition, there will be no impact on the existing transit stops. A minimum one metre wide safety setback from the TTC streetcar track allowance will be maintained.

Additionally, there will be no impact on the bus transit service on Parliament Street. Access to existing transit stops on Parliament Street will be maintained.

Emergency Vehicle Impact

The lane closures on King Street East and Parliament Street will not require detour of emergency vehicles.

Business Access Impact

All business accesses will be maintained during construction.

Haul Routes

The station excavation will produce approximately 75,000 cubic metres of spoils generating 20 truck trips per day and the station construction will generate 20 truck trips per day.

As the Station is also the TBM site, Metrolinx estimates that approximately 260,000 cubic metres of tunnelled muck will need removal requiring an average of 70 truck trips per day. The potential haul routes to the OL Corktown Station are shown in Figures 30 and 31. These routes will be confirmed and refined when the Project Co. joins the project.

The trucks arriving from the west will travel up Sherbourne Street and make a right-turn on King Street East to access the North Site and on Front Street East to access the South Site. The trucks arriving from the east and destined to the North Site will utilize Richmond Street to access Parliament Street and enter the work site via southbound

right-turn movement. The trucks arriving from the east and destined to the South Site will utilize Front Street to access Parliament Street.

The trucks exiting the site will use Parliament Street Southbound, Front Street Westbound and Jarvis Street Southbound to connect to the Gardiner Expressway. The trucks exiting the North and South sites will utilize Front Street/Eastern Avenue to access the Don Valley Parkway.

Trucks will enter and exit the work sites in a forward motion and traffic control persons will be positioned at the site access and egress to prevent any conflict between the construction vehicles and pedestrians. Site hoarding and staging area will be designed to ensure clear sight lines are available for both pedestrians and truck drivers. The Project Co. will ensure the work zone is well lit to provide full visibility of pedestrians to the truck drivers.

City staff and Metrolinx are acutely aware that increased truck traffic on the haul routes potentially poses increased risk to pedestrians and cyclists. City staff will work with Metrolinx and Project Co. to implement strategies to ensure Vision Zero principles are followed and these potential risks are minimised.

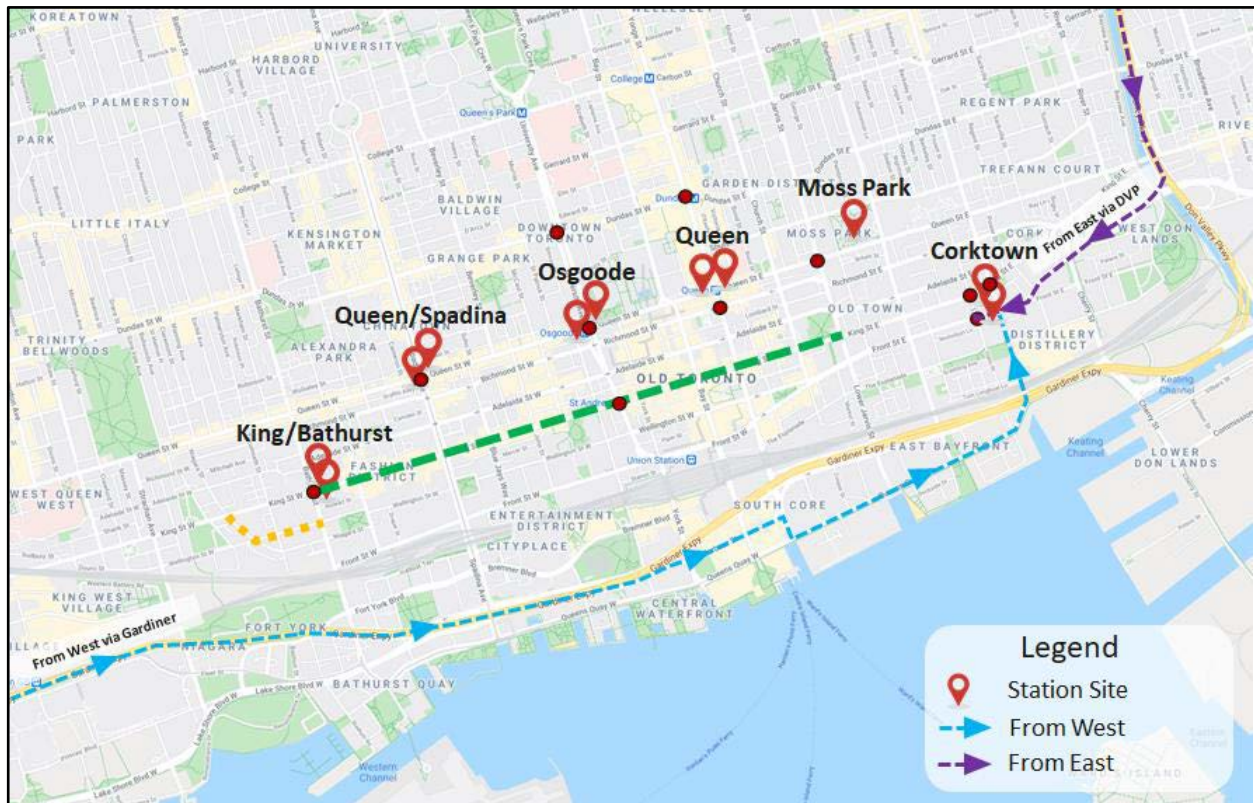


Figure 30 – Potential Inbound Haul Routes for OL Corktown Station

Source: Metrolinx

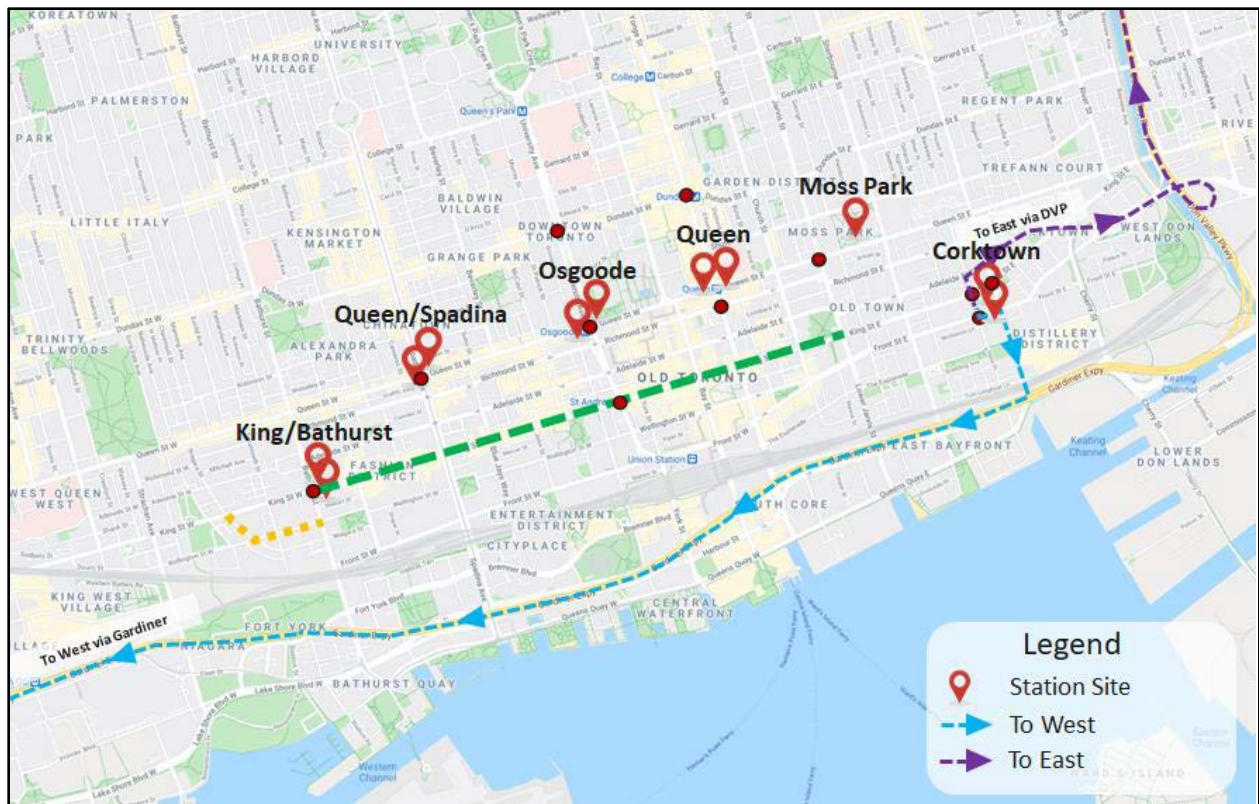


Figure 31 – Potential Outbound Haul Routes for OL Corktown Station

Source: Metrolinx

Traffic Impacts and Mitigation Measures

The construction of the OL Stations in the downtown area will require long-term curb lane closures and full closures of Queen Street and James Street. In addition, the City has a number of construction projects programmed which would occur concurrently with the OL works.

Metrolinx's consultant studied the weekday a.m. and p.m. peak period traffic impacts of the OL and City-led works using a microsimulation computer model. The model study area focuses on the transportation network bounded by Dundas Street to the north, Parliament Street to the east, Front Street to the South and Bathurst Street to the west and encompasses the OL downtown stations discussed in this report.

The vehicular traffic impacts were studied for the following scenarios:

- Base Case – pre-covid existing traffic conditions
- Future Background Travel Demand – future traffic conditions with the City-led construction projects, only.
- Future Total Travel Demand – future traffic conditions with the City-led construction projects and OL works.

Comparison of the Future Background Travel Demand and the Future Total Travel Demand scenarios indicates the incremental impact of the OL-related road closures on the boundary road network.

Intersection traffic operations were analyzed during the a.m. and p.m. peak period on the intersections of the east-west corridors of Dundas Street, Queen Street, Richmond Street and Adelaide Street with the north-south corridors of Bay Street, Yonge Street and Victoria Street.

The Levels of Service (LOS), which indicates average delay experienced by the motorists and maximum queue length, were used as measures of effectiveness (MOE) to evaluate the performance of the intersections during the peak hours. The LOS criteria is categorized from A to F with LOS A (free flow) for 10 seconds delay per vehicle, LOS B (reasonably free flow) for 10 to 20 seconds delay per vehicle, LOS C (stable flow) for 20 to 35 seconds delay per vehicle, LOS D (approaching unstable flow) for 35 to 55 seconds delay per vehicle, LOS E (unstable flow) for 55 to 80 seconds delay per vehicle and LOS F (breakdown flow or demand exceeds capacity) for greater than 80 seconds delay per vehicle.

The estimated MOE for the boundary road intersections for each of the three scenarios during the a.m. and p.m. peak hour are shown in Appendix C.

Additionally, travel time data for the east-west corridors was studied to understand the journey time impacts of the three scenarios during the a.m. and p.m. peak periods.

The findings of the analysis for the a.m. and p.m. peak periods for each of the three scenarios are summarized below:

Base Case

In the a.m. peak period:

- In general the east-west corridors of Dundas Street, Queen Street, Richmond Street and Adelaide Street operate at a good LOS, indicating stable traffic flow and residual capacity to accommodate additional traffic growth.
- Travel time data indicates that in the base case motorists on the east-west corridors of Dundas Street and Wellington Street typically take up to 10 minutes to travel between the boundaries of Parliament Street and Bathurst Street. Motorists on Adelaide Street and Front Street take up to 8 minutes, while motorists on Richmond Street up to 9 minutes.

In the p.m. peak period:

- Generally, the east-west corridors of Dundas Street, Queen Street, Richmond Street and Adelaide Street at Bay Street, Yonge Street and Victoria Street all operate under congested traffic conditions.
- Travel time data indicates that in the base case motorists on the east-west corridors of Dundas Street and Wellington Street typically take up to 18 minutes to travel between the boundaries of Parliament Street and Bathurst Street. Motorists on Front Street take up to 20 minutes and up to 22 minutes on Richmond Street and Adelaide Street.

Future Background Travel Demand (City-led projects)

The future background travel demand on the study area road network was estimated by considering the traffic diversion due to the road closures for the City-led projects, which

are programmed to occur concurrently with the OL works. The following City-led construction projects were included:

- Gardiner Express Rehabilitation – Grand Magazine Street to York Street (2024 to 2026)
- TTC 504 King streetcar track rehabilitation – 2024
- Yonge Tomorrow – Reconfiguration of Yonge Street between Queen Street and College Street
- Sewer Rehabilitation – Richmond Street between Simcoe Street and John Street (2023); Richmond Street between Peter Street to Spadina Avenue (2023); Wellington Street between Clarence Square and Blue Jays Way (2024); Front Street between Bay Street and Scott Street (2024).
- Watermain Replacement – Adelaide Street between York Street and Victoria Street (2022); Dundas Street, between Church Street and Sherbourne Street (2024); and Front Street between Bathurst Street and Spadina Avenue (2026).

For the purpose of this traffic assessment, all the City-led construction works were assumed to occur concurrently, thus providing a very conservative (worst case) estimation of traffic diversion and resultant traffic impacts.

In the a.m. peak period:

- In general the east-west corridors of Dundas Street, Queen Street, Richmond Street and Adelaide Street are expected to continue operating at a good LOS, indicating stable traffic flow and residual capacity to accommodate additional traffic growth/diverted traffic.
- The lane closures due to the City-led construction work on the east-west corridors will result in reduced capacity and slightly longer travel times than the Base Case traffic conditions.
- Traffic levels drop on corridors where city led construction work is taking place, including Richmond Street and Adelaide Street and increase on the alternate corridors of Queen Street, Wellington Street and Front Street.
- Due to either increased traffic, as drivers take advantage of residual capacity, or reduced capacity due to works, all corridors will see increased journey times of between 1 and 7 minutes.

In the p.m. peak period:

- Dundas Street, Queen Street, Richmond Street, and Adelaide Street continue to operate under congested conditions, when compared to the Base Case traffic conditions.
- The existing p.m. peak congestion will significantly worsen due to the City-led construction works reducing capacity on some corridors and with drivers switching to alternate corridors.
- Due to either increased congestion, reduced capacity or a combination of both all corridors will see increased journey times of between 5 and 24 minutes.
- With the increased congestion and longer journey times some traffic flows drop, illustrating drivers either re-timing their trip outside of the p.m. peak period, using alternate routes outside the downtown network, switching to alternative modes such as transit or cycling or even choosing not to travel.

Future Total Travel Demand (Combined City-led and OL works)

The future total travel demand on the study area road network was determined by considering the overall travel diversion due to the OL works, including the construction related truck trips on the haul routes, occurring concurrently with the City-led programmed construction works. Except for the full road closures of Queen Street and James Street, all long-term road closures for the OL works are limited to curb lanes with localized traffic impacts. James Street, a local roadway, is not expected to have a significant traffic displacement during its closure. However, Queen Street, a major arterial roadway, is expected to displace approximately 900 vehicles during the a.m. peak hour and 1500 vehicles during the p.m. peak hour. These displaced vehicles are expected to divert to alternative parallel routes, with some trips shifting to alternative modes of transport, including transit and cycling or travelling outside of the peak hours.

In the a.m. peak period:

- With the combined City-led and OL works, in general the road network continues to operate satisfactorily with only few traffic movements operating at the highest delay, LOS F (greater than 80 seconds delay).
- The incremental impact of the OL works and road closures on the network is minimal.
- The displacement of the Queen Street traffic will result in increased travel demand on the alternate parallel routes of Dundas Street, Richmond Street, Wellington Street and Front Street.
- Some traffic will be displaced altogether, either to alternative modes such as transit or cycling, or to routes outside of the downtown network or to a different (non-peak period) time. Some trips maybe displaced completely i.e. not happen at all.
- Due to a combination of increased traffic and/or reduced capacity all corridors will see increased journey times of between 1 and 6 minutes.

In the p.m. peak period:

- The east-west corridors of Dundas Street, Richmond Street, and Wellington Street will continue to operate under congested conditions.
- The existing p.m. peak congestion will significantly worsen.
- However, the incremental impact of the OL works and road closures on the network is minimal i.e. not significantly worse than the network with only the City-led works.
- With reduced capacity in the network and increased congestion some traffic will be displaced altogether, either to alternative modes such as transit or cycling, or to routes outside of the downtown network or to a different (non-peak period) time. Some trips maybe displaced completely i.e. not happen at all.
- Due to either increased congestion, reduced capacity or a combination of both all corridors will see increased journey times of between 5 and 29 minutes.

Figures 32 and 33 show the east-west traffic volumes along with percentage traffic change and average travel time for the key corridors where they intersect Yonge Street.

| A.M. Peak East-West Corridor Traffic Flows (% traffic change) [corridor travel time in mins] | | | |
|---|-------------------|---------------------------------------|--------------------------------------|
| Corridor | Base Case | Future Background (City-led Projects) | Future Total (City-led+OL Works) |
| Dundas Street | 1,037 [10 min] | 1,036 (-0%) [+3 min EB+7 mins WB] | 1,092 (+5%) [+4 min EB/+6 min WB] |
| Queen Street | 860 | 1,025 (+19%) | 0 (-100%) |
| Richmond Street | 1,447 [9 min] | 1,438 (-1%) [+2 min] | 1,575 (+9%) [+3 min] |
| Adelaide Street | 639 [8 min] | 527 (-17%) [+3 min] | 548 (-14%) [+2 min] |
| Wellington Street | 1,209 [10 min] | 1,347 (+11%) [+2 min] | 1,216 (+1%) [+1 min] |
| Front Street | 293 [8 min] | 310 (+6%) [+1 min] | 343 (+17%) [0 min] |

Figure 32 – A.M. Peak East-West Corridor Traffic Flows at Yonge Street

Source: Metrolinx

| P.M. Peak East-West Corridor Traffic Flows (% traffic change) [corridor travel time in mins] | | | |
|---|-------------------|---------------------------------------|---------------------------------------|
| Corridor | Base Case | Future Background (City-led Projects) | Future Total (City-led+OL Works) |
| Dundas Street | 1,136 [18 min] | 914 (-20%) [+10 min EB/+10 min WB] | 947 (-17%) [+14 min EB/+11 min WB] |
| Queen Street | 1,040 | 943 (-9%) | 0 (-100%) |
| Richmond Street | 1,260 [22 min] | 1,155 (-8%) [+24 min] | 1,236 (-2%) [+29 min] |
| Adelaide Street | 1,115 [22 min] | 912 (-18%) [+21 min] | 685 (-39%) [+24 min] |
| Wellington Street | 850 [18 min] | 953 (+12%) [+24 min] | 922 (+8%) [+23 min] |
| Front Street | 413 [20 mins] | 412 (-0%) [+5 min] | 411 (-0%) [+5 min] |

Figure 33 – P.M. Peak East-West Corridor Traffic Flows at Yonge Street

Source: Metrolinx

In summary, while impacts will be seen, in general the network should operate satisfactorily in the a.m. peak period with both the City-led works and the OL closures. The greatest impact will be seen in the already congested p.m. peak period where congestion will increase further and vehicle journey times will be significantly impacted.

Traffic Mitigation

Metrolinx and the Project Co. will utilize travel demand management and traffic management strategies to minimize the impact of the OL works on the network-wide traffic congestion and maintain safety and mobility of all road users in the work zones.

The traffic simulation analysis predicted the critical traffic movements with congested traffic conditions and determined traffic signal timing modifications required to maintain acceptable levels of mobility on the boundary road network. These traffic signal timing modifications will be implemented by the City with technical input from Metrolinx and the Project Co. to ensure changes in travel patterns can be accommodated. Furthermore, frequent monitoring of the traffic operations will be undertaken to ensure modifications are optimized and reflect any changing conditions, for example, due to observed issues or a new or revised work zone.

The Project Co. will install advanced advisory signage including portable changeable message signs at the network level to inform road users of the road closures. Additionally, road closure information will be provided through the project website, social media and traditional media to encourage alternative routes or travel schedules. The Project Co. will submit the Road Disruption Activity Reporting System (RoDARS) notification and inform the web-based network service providers such as Google and Waze etc. of the road closures.

In order to encourage alternative modes of travel and reduce auto trips in the downtown area, Metrolinx will install new streetcar tracks on York Street, between Queen Street West and Adelaide Street West, to facilitate the detour of the TTC 501 Queen streetcar service. Metrolinx and TTC will coordinate to ensure the transit detour is established with accessible transit stops and the travelling public is informed well in advance. In addition, all other transit lines including buses, streetcars and subway service will be maintained.

Metrolinx and the Project Co. will maintain all designated bike lanes adjacent to the OL Station work zones and keep them free of any debris, loose material, snow and ice to ensure safety of bike operations in the work zones. Additionally, advanced advisory signage will be installed to guide the bicyclists to temporary detours around the work zones. Metrolinx will install the southbound cycle track on York Street, between Queen Street West and King Street West, to provide a detour for cyclists during the Queen Street full closure. The detour information and map will be included in the closure notification to allow cyclists to plan their trip accordingly.

The OL works will maintain safe pedestrian connectivity in the work zones. In the event of a sidewalk closure, the Project Co. will install a temporary, unobstructed and well-lit pedestrian walkway in the curb lane adjacent to the closed portion of the sidewalk. The majority of the temporary walkways will be provided with a clear 2.1 metres width. In occasional cases, where the temporary walkways cannot be provided due to space constraints, the pedestrians will be safely detoured to the alternative sidewalk at the nearest signalized crossing. Temporary traffic signage will be installed to inform the pedestrians of the sidewalk closure and guide them to the temporary walkways or alternative sidewalk. The Project Co. will ensure the pedestrian walkways are kept free

of dirt, loose material, snow and ice while meeting the accessibility standards to accommodate pedestrians with disabilities. Temporary curb ramps will be installed for pedestrians with mobility disability. The Project Co. will ensure adequate sight lines are available at the site accesses and traffic control persons are positioned to avoid any conflicts between the construction vehicles and pedestrians.

In the case of the Queen Street Closure, pedestrian access to the nearby businesses will be maintained. The pedestrian bridge over Queen Street will be maintained to provide pedestrian connectivity across the closed portion of Queen Street.

The OL station sites will generate a significant amount of construction related traffic, including heavy trucks to deliver construction material. The Project Co. will install temporary traffic signage warning the road users of construction vehicles ingress and egress. As mentioned earlier, traffic control persons will be stationed at the site accesses to ensure construction vehicles can safely enter and exit the site without any conflict with the road users and impeding the traffic flow. In addition, the site accesses and the hoarding will be designed to ensure clear sightlines for the truck drivers and pedestrians. The Project Co. will prepare a construction vehicle haul route plan, which will be reviewed by the City staff to ensure the impacts on the traffic flow can be adequately mitigated and that pedestrian and cycle safety is given high priority.

To reduce congestion in the downtown area, the haul trucks will not be allowed to stage on downtown city roads and vehicle idling will be discouraged in accordance with the City's Idling Control By-law. Additionally, Metrolinx and the Project Co. will encourage site construction workers to take transit to the work sites. This will reduce traffic congestion and additional demand on the nearby parking facilities. Private vehicle parking will not be allowed in the work zones.

In accordance with the Toronto Municipal Code Chapter 743, Metrolinx's contractors are required to obtain a permit before undertaking any street work or temporary street occupation within the City road right-of-way. As part of the permit application, the Project Co. will need to prepare and submit traffic control plans that are compliant with the City and Provincial policies and standards. These plans will be carefully reviewed by the City staff to ensure safety and mobility needs of the travelling public, businesses and community are met. Once implemented, City staff, in coordination with Metrolinx and Project staff, will monitor the installation to ensure its compliance with the approved traffic control plan. City staff intend to establish a Construction Hub in this area to provide a high level of oversight and ensure coordination in logistical planning between Metrolinx work sites, City-led project work sites, developer work sites and any other works taking place on or adjacent to the public right of way. The Construction Hub Coordinator will also be a "single point of contact" for these parties, as well as for business and the public/residents. In addition to the Construction Hub weekly meetings, there will be bi-weekly Traffic Management Committee meetings for the OL works, attended by City Transportation Services, City Emergency Services, Toronto Police, Metrolinx and Project Co. staff. Monthly Construction Liaison meetings, attended by Councillors and/or their staff, businesses, other stakeholders and residents will also be held by Metrolinx. In the event the permit holder violates the terms and conditions of the permit, the issued permit may be cancelled in accordance with authority given by Chapter 743.

Finally, City staff have reviewed the City Capital Works program to ensure proper coordination with the OL works. These discussions are ongoing and will either advance, defer or bundle the City projects with the OL works. In addition, City staff will continue to coordinate with Metrolinx to ensure that any planned construction work on the parallel routes is kept to a minimum and that overall impacts to road network users are understood and minimised as far as is practicable.

Communication and Stakeholder Engagement

Through its work on other major transit projects such as the Eglinton Crosstown LRT, Finch West LRT, and GO Expansion, Metrolinx has developed and implemented a comprehensive communications program utilizing various meeting techniques to keep City Councillors and their staff apprised of plans and developments related to the project. Metrolinx facilitates regular monthly councillor and stakeholder meetings (including local Members of Provincial Parliament (MPPs), local Councillors, Metrolinx staff, project partners and City staff) across the project corridors. Key stakeholders, such as TTC staff, are updated and consulted frequently, often several times each week. This strategy will also be employed for the Ontario Line project.

As part of the communication strategy, Metrolinx has started initial consultations with the local Councillors, Members of Provincial Parliament (MPP), and Business Improvement Areas (BIA) in the downtown area. These initial consultations centred on outlining construction opportunities and constraints and receiving comments on the construction plans, including traffic and transit diversion. Phase 1 of the stakeholder engagement took place in August and September 2021 and included seven virtual meetings with the City Councillors and briefing with MPP Glover and MPP Morrison and meeting with the local BIAs (i.e. Downtown Yonge BIA, Financial District BIA and St. Lawrence Market BIA).

Additionally, City Transportation Services staff have met with the local Councillors and their staff to provide updates on the Ontario Line construction plans, road closures, impacts and mitigation measures to minimize impacts on the community, businesses and road users. This inter-action will continue throughout the project.

The majority of the comments and concerns raised by the Councillors, MPPs, and BIAs were about the following:

- Ensuring appropriate access for all road users and pedestrians,
- Minimizing truck traffic in the area,
- Minimizing the construction staging footprint in the area,
- Minimizing negative impacts to business,
- Ensuring a high level of engagement with community groups and BIA's,
- Ensuring appropriate coordination of construction work with other projects taking place within the city.
- Ensuring BIA involvement in the TTC 501 Queen streetcar detour planning and site visit with TTC and the City,
- Ensuring all utility and City works are completed before the Queen Street closure, and
- Keeping the BIAs and businesses aware of upcoming projects/works.

Metrolinx will address these concerns through the project agreement and the Project Co. will be required to mitigate these impacts, including:

- Having experienced communications and community relations staff to support Metrolinx's communication and stakeholder engagement programs.
- Providing notification of construction activities in advanced of starting works,
- Ensuring all business, government and hospital accesses, including loading/delivery zones are maintained.
- Requiring frequent window washing and cleaning.
- Requiring safe, visually appealing and well-lit construction hoarding, while safeguarding mobility access.
- Requiring the successful Proponent to develop, implement and assess a 'Business Supports Plan' for the area which includes marketing and advertising initiatives, and;
- Ensuring construction staging areas minimize disruption to the area.

Additionally, Metrolinx will work with the local businesses to ensure they receive up-to-date information on construction activities and timing. The Project Agreement with the Project Co. will ensure a Business Support Plan is developed, which includes:

- Reporting regularly on its progress in buying goods and services for the project from local businesses.
- Ensuring access to local business during construction is always maintained.
- Keeping the working areas and vicinity clean of garbage and debris.
- Supporting Metrolinx's 'shop local' or business sustainment and promotion efforts using promotions and incentives:
 - Examples include using advertisement to promote 'shop local', partnering with local Business Improvement Areas and businesses to promote events, sponsor street events and festivals, explore opportunities for street arts or offer training,
- Meeting regularly with members of the business community to share information and receive feedback including through the Construction Liaison Committee (CLC) which will be set up or via a working group, and
- Establishing a City-based "BIA Liaison" position, funded by Metrolinx, to serve as a single point of contact for businesses and residents on the OL project related matters.

Metrolinx started Phase 2 of the stakeholder engagement with a virtual open house on October 7, 2021, for the downtown segment and presented information regarding long-term road closures and traffic and transit diversions due to the future Queen Street full closure. Metrolinx will continue with the public engagement through a series of scheduled virtual open houses.

During construction of the OL project, Metrolinx will continue with the stakeholder consultation strategy by providing one-on-one briefings to the local councillors to address specific milestone events and emerging issues. Metrolinx, project partners and City staff will work with the local Councillors to address any issues in a timely manner. Specifically, City staff will hold timely one-on-one briefings with the local councillors to provide information and advice on concerns related to the project. Briefings will be

provided prior to any significant road closure required for project construction work. Further, City staff will liaise with Metrolinx and Project Co. to minimize disruption during construction activities.

Additionally, community outreach and Business Improvement Area (BIA) meetings, plus Construction Liaison Committee meetings (which include BIAs and local businesses), will be scheduled and conducted by Metrolinx and Project Co. throughout the long-term construction period to provide information and address concerns as they arise. In all cases, when a significant change in traffic staging is planned, Metrolinx will issue public notices in advance of the work, both on the project website and delivered door-to-door. Major changes will be reported on television, radio and social media platforms.

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SIGNATURE

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ATTACHMENTS

Appendix A: Ontario Line Early Works Construction – Road and Lane Closures for Six Downtown Stations
Appendix B: Traffic By-law Amendments
Appendix C: Key Intersection Measures of Effectiveness